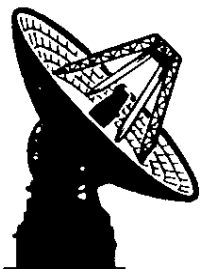


RESOURCE ALLOCATION REVIEW



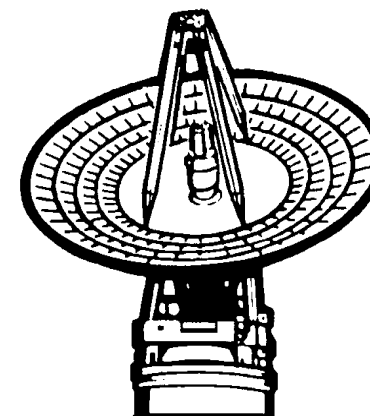
Deep Space Network Customer Forum

Version 1.0 Preliminary

2008 - 2010

RAPS Team

September 20, 2007



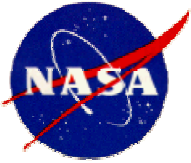


RESOURCE ALLOCATION REVIEW



Agenda

- ◆ **Loading Study**
- ◆ **Periods of Contention**
- ◆ **Events, Recommendations, and Analyses**



RESOURCE ALLOCATION REVIEW



Loading Study

- ◆ **Assumptions**
- ◆ **Project Changes and Changes in DSN Resource Support Request**
- ◆ **New Projects**
- ◆ **Deleted Projects**
- ◆ **DSN User / Mission Planning Set**
 - Ongoing / Approved Projects
 - Advanced / Planning Projects
- ◆ **Major DSN Downtimes by Date**
- ◆ **IND Resource Implementation Planning Matrix**

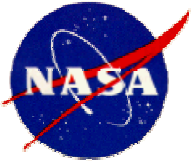


RESOURCE ALLOCATION REVIEW



Assumptions

- ◆ **DSS-16 is in an indeterminate downtime as of February 1, 2006. The previous designation of 26M meaning DSS-16,46,66 will now equate to DSS-46,66. All nominal support previously assigned to DSS-16 has been reassigned to DSS-27 or DSS-24. DSS-16 will provide committed support for launches and special activities after February 1, 2006. As of September 29, 2008 DSS-46 and DSS-66 are scheduled to be taken down for an indeterminate length of time.**
- ◆ **The following Project/User requirements were not considered during the analysis process and will be negotiated during the Mid-Range Scheduling Process:**
 - **ATOT – Development (4 - 8 hour supports); Mission (8 hour supports)**
 - **DSN - (Antenna and ZDD Calibrations)**
 - **GBRA - Guest Observations (4 – 8 hour supports); PRA-GAVT (all supports); Host Country 4 – 8 hour supports**
 - **GSSR - (GODR supports at DSS-14/15)**
 - **MER 1 & 2 - Uplink and Downlink MSPA passes**
 - **RFC - Clock Sync and CAT M&E S/X and X/Ka-band VLBI**
 - **Space Geodesy Programme**



RESOURCE ALLOCATION REVIEW

Loading Study

Project Changes Since February 2007



- ◆ **Advanced Composition Explorer**
 - 2008: Changed supports from 2 (3.5 hour) passes per week to 3 (1 hour) passes in weeks 40 – 48 . Decreased 3 (3.5 hour) passes per week in weeks 40 – 48 to 2 (3.5 hour passes) per week.
- ◆ **Cluster II**
 - 2008: Beginning week 40 added 4 (2 hour) passes per week at DSS-34/45.
 - 2009: Continued with additional passes per week at DSS-34/45 during DSS-43 downtime (to week 13).
- ◆ **Dawn**
 - Due to launch date changes from June/July to September, the updated events and requested supports are pending at this time.
- ◆ **EPOXI (Deep Impact)**
 - Support added for discovery mission.
- ◆ **Goldstone Solar System Radar**
 - 2008: Added 3 (3 hour) passes to weeks 01 & 49 for Venus GBT. Added 3 (3 hour) passes to weeks 25 & 27 for Mercury GBT.
 - 2009: Added 3 (3 hour) passes to weeks 03 & 21 for Mercury GBT. Added 3 (3 hour) passes to weeks 21 & 32 for Venus GBT .
- ◆ **Kepler**
 - Launch date changed from 11/01/2008 to 02/16/2009.



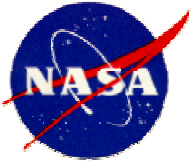
RESOURCE ALLOCATION REVIEW

Loading Study

Project Changes Since February 2007



- ◆ **Opportunity (Mars Exploration Rover – B)**
 - 2009: Extended supports through end of year, beginning week 40.
 - 2008: Added 8 hour passes for Phoenix Relay, 1 (8 hour) pass in week 20, 7 (8 hour) passes in weeks 21 - 37.
 - 2010: Added supports from weeks 01 – 39.
- ◆ **Spirit (Mars Exploration Rover – A)**
 - 2009: Extended supports through end of year, beginning week 40.
 - 2008: Added 8 hour passes for Phoenix Relay, 1 (8 hour) pass in week 20, 7 (8 hour) passes in weeks 21 - 37.
 - 2010: Added supports from weeks 01 – 39.
- ◆ **Mars Express Orbiter**
 - 2008: Added 8 hour passes for Phoenix Relay, 1 (8 hour) pass in week 20, 7 (8 hour) passes in weeks 21 - 37.
- ◆ **Mars Reconnaissance Orbiter**
 - Replaced all 2(8 hour) 34m passes for Ka Ops Demo with 2(8 hour) Prime Science supports.
 - Relaxed the elevation constraint for 34m stations from 20 degrees to now 10 degrees.



RESOURCE ALLOCATION REVIEW

Loading Study

Project Changes Since February 2007

◆ MESSENGER

- 2008: Changed Flyby DDOR supports from 8 passes to 4 passes in week 02, added 4 Flyby DDOR passes per week in weeks 03 – 04. Changed TCM support to add 2 (8 hour) passes at 70m in week 41. Increased from 1 (8 hour) pass to 4 (8 hour) passes at DSS-14,63 for Flyby 2.
- 2009: TCM moved from week 15 to week 17, 2 (8 hour) passes. Added 4 DDOR supports in week 40. Added 10 (8 hour) 70m passes to week 40 for Flyby. Increased Flyby support in week 41 from 2 (8 hour) passes at DSS-43,63 to 4 (8 hour) passes.

◆ Mars Science Laboratory 2009

- 2009: Increased Cruise supports beginning week 42, from 3 (4 hour) passes per week to 5 (8 hour) passes.
- 2010: Continued with increased Cruise coverage through week 21.

◆ NExT (Stardust)

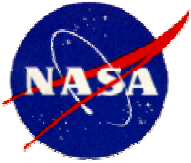
- Support added for discovery mission.

◆ Rosetta

- 2008: Added 1 (8 hour) pass in weeks 05 – 06 for Cruise at DSS-24,34.

◆ SOHO

- 2007: HSO Moved from weeks 37 – 45 of 2007 to weeks 49 of 2007 - 05 of 2008
- 2008: Added on additional 70m High-rate Keyhole coverage pass in week 08.
- 2009: Increased 70m High-rate Keyhole coverage from 12 (4 hour) passes to 14 (4 hour) passes in weeks 06, 19, 32, and 45.



RESOURCE ALLOCATION REVIEW

Loading Study

Project Changes Since February 2007

◆ Stereo Ahead

- 2008: Reduced 7 (4 hour) Prime Science passes with 6 (4 hour) passes in weeks 02, 14, 28 & 40, added 1 (7 hour) HGA CAL pass for weeks 02, 14, and 28, and 1 (8 hour) HGA CAL pass in week 40. Added 7 (3 hour) SECCHI Campaign passes in weeks 02, 03.
- 2009: Reduced 7 (4 hour) Prime Science passes with 6 (4 hour) passes in weeks 2, 14, 28 & 40, and added 1 (8 hour) HGA CAL pass for same weeks.

◆ Stereo Behind

- 2008: Reduced 7 (4 hour) Prime Science passes with 6 (4 hour) passes in weeks 02, 14, 28 & 40, added 1 (7 hour) HGA CAL pass for weeks 02, 14, and 28, and 1 (8 hour) HGA CAL pass in week 40. Added 7 (3 hour) SECCHI Campaign passes in weeks 02, 03.
- 2009: Reduced 7 (4 hour) Prime Science passes with 6 (4 hour) passes in weeks 2, 14, 28 & 40, and added 1 (8 hour) HGA CAL pass for same weeks.



RESOURCE ALLOCATION REVIEW

Loading Study

Project Changes Since February 2007



◆ Voyager 1

- 2008: Additional supports added for various Sequence activities. Added 1 (6 hour) pass at DSS-14, and 1 (6 hour) pass at DSS-14,15,25 in weeks 01 – 02. Added 2 (6 hour) passes at DSS-14 in weeks 14, 27, and 40. Added 2 (6 hour) passes at DSS-14,15,25 in weeks 14, 22 and 40. Added 2 (5 hour) passes for DTR Array in weeks 02 and 33.
- 2009: Additional supports added for Sequence activities. Added 1 (6 hour) pass at DSS-14 and 2 (6 hour) passes at DSS-14,15,25 in week 02. Added 2 (6 hour) passes at DSS-14, and 2 (6 hour) passes at DSS-14,15,25 in weeks 15, 28, and 40. DTR Array supports – 2 (5 hour) passes in weeks 12 and 39. Added 1 (7 hour) MAGROL Array passes in weeks 44, 45. Added 1(7 hour) ASCAL Array pass added in week 45.

◆ Voyager 2

- 2008: Added 1(4 hour) pass at DSS-34 for GYROS in week 03. Added 1(16 hour) pass for HYBIC SWAP at DSS-43 in week 04. Added BLF supports – 2 (4 hour) passes at each DSS-34 and DSS-45 in weeks 05, 18, 31 and 44. Added 1 (4 hour) pass for BLF at each DSS-34 and DSS-45 in weeks 06, 19, 32, and 45. Added 2 (5 hour) passes for Sequence activity at each DSS 43 and DSS-45 in weeks 06, 19, 32 and 45.
- 2009: Added BLF supports – 1 (4 hour) pass at each DSS-34 and DSS-45 in weeks 05, 18, 31 and 44. Added 2 (4 hour) passes for BLF at each DSS-34 and DSS-45 in weeks 06, 19, 32, and 45. Added 2 (5 hour) passes for Sequence activity at each DSS 43 and DSS-45 in weeks 07, 20, 33 and 46.



RESOURCE ALLOCATION REVIEW

Loading Study

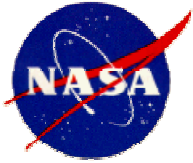
Project Changes Since February 2007

◆ Wind

- 2008: Changed TCMs – 1 (3 hour) pass in weeks 27, 40 moved to weeks 24, 37 and added 1 (3 hour) pass to week 50.
- 2009: Added 1 (3 hour) TCM pass in week 40.

◆ WMAP

- 2008: Moved 3 of 7 passes per week at DSS-14/34/63 to DSS-34 in weeks 40 – 52 due to DSS-43 downtime.

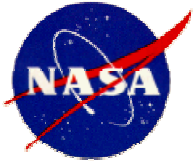


RESOURCE ALLOCATION REVIEW

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New Projects Since February 2007

Project	Acronym	Launch or Start	EOPM	EOEM
EPOXI (Deep Impact)	DIF	07/03/07	01/04/09	---
NExT (Stardust)	SDU	07/03/07	02/24/11	---



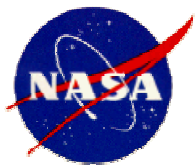
RESOURCE ALLOCATION REVIEW

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Removed/Unsupported Projects Since February 2007

Project	Acronym	Launch or Start	EOPM	EOEM
None				



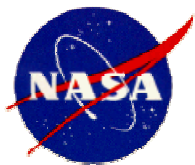
RESOURCE ALLOCATION REVIEW

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DSN User / Mission Planning Set

– Ongoing / Approved Projects –

Project	Acronym	Launch or Start	EOPM	EOEM
DSN Antenna Calibration	DSN	--	--	--
DSS Maintenance	DSS	--	--	--
DSN ZDD Calibration	DSN	11/01/04	--	--
European and Global VLBI Systems	EGS	--	--	--
Ground Based Radio Astronomy	GBRA	--	--	--
Reference Frame Calibration (Cat M&E and Clock Sync)	DSN	--	--	--
Space Geodesy	SGP	--	--	--
Voyager 2	VGR2	08/20/77	10/15/89	12/31/10
Voyager 1	VGR1	09/05/77	12/31/80	12/31/10
Goldstone Solar System Radar	GSSR	04/01/85	--	--
Ulysses	ULYS	10/06/90	09/11/95	03/30/08
Geotail	GTL	07/24/92	07/24/95	10/01/08
Wind	WIND	11/01/94	11/01/97	10/01/11
SOHO	SOHO	12/02/95	05/02/98	10/01/11
Polar	POLR	02/22/96	08/23/97	04/30/08
Advanced Composition Explorer	ACE	08/25/97	02/01/01	10/01/13
Cassini	CAS	10/15/97	06/30/08	06/30/10



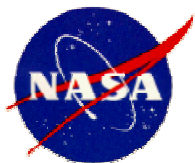
RESOURCE ALLOCATION REVIEW

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DSN User / Mission Planning Set

– Ongoing / Approved Projects –

Project	Acronym	Launch or Start	EOPM	EOEM
Chandra X-Ray Observatory	CHDR	07/23/99	07/24/09	07/24/14
Imager for Magnetopause-to-Aurora Global Exploration	IMAG	03/25/00	05/30/02	TBS
Cluster 2 - S/C #2 (Samba)	CLU2	07/16/00	02/15/03	09/30/10
Cluster 2 - S/C #3 (Rumba)	CLU3	07/16/00	02/15/03	09/30/10
Cluster 2 - S/C #1 (Salsa)	CLU1	08/09/00	02/15/03	09/30/10
Cluster 2 - S/C #4 (Tango)	CLU4	08/09/00	02/15/03	09/30/10
Mars Odyssey 2001	M01O	04/07/01	08/24/04	12/31/10
Wilkinson Microwave Anisotropy Probe	WMAP	06/30/01	10/01/03	09/30/10
Advanced Tracking and Observational Techniques (ATOT)	ATOT	02/01/02	12/31/08	- - -
International Gamma Ray Astrophysics Lab	INTG	10/17/02	12/18/04	12/16/10
Hayabusa (MUSES - C)	MUSC	05/09/03	06/10/10	TBS
Mars Express Orbiter	MEX	06/02/03	02/11/06	12/31/10
Spirit (Mars Exploration Rover - A)	MER2	06/10/03	04/06/04	09/30/08
Opportunity (Mars Exploration Rover - B)	MER1	07/07/03	04/27/04	09/30/08
Spitzer Space Telescope (SIRTF)	STF	08/25/03	05/31/09	05/31/14
Rosetta	ROSE	02/26/04	12/31/15	- - -
MESSENGER	MSGR	08/03/04	03/19/12	- - -



RESOURCE ALLOCATION REVIEW

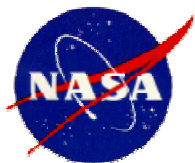
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DSN User / Mission Planning Set



– Ongoing / Approved Projects –

Project	Acronym	Launch or Start	EOPM	EOEM
Mars Reconnaissance Orbiter	MRO	08/12/05	12/31/10	12/31/15
Venus Express	VEX	11/09/05	09/24/07	01/22/09
New Horizons	NHPC	01/19/06	04/17/16	TBD
Stereo Ahead	STA	10/26/06	01/22/09	01/22/12
Stereo Behind	STB	10/26/06	01/22/09	01/22/12
EPOXI (Deep Impact)	DIF	07/03/07	01/04/09	---
NExT (Stardust)	SDU	07/03/07	02/24/11	---
Phoenix	PHX	08/04/07	10/26/08	TBD
SELENE	SELE	09/13/07	10/25/07	TBD
Dawn	DAWN	09/19/07	03/07/11	TBD
Lunar Reconnaissance Orbiter	LRO	10/28/08	09/31/10	TBD
Lunar Crater Observation and Sensing Satellite (LCROSS)	LCRO	10/28/08	02/05/09	---
Kepler	KEPL	02/16/09	12/31/12	TBD
Mars Science Laboratory 2009	MSL	09/15/09	03/04/12	TBD



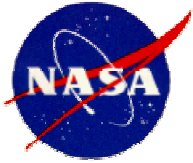
RESOURCE ALLOCATION REVIEW

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DSN User / Mission Planning Set

– Advanced / Planning Projects –

Project	Acronym	Launch or Start	EOPM	EOEM
Chandrayaan - 1	CH1	03/01/08	03/01/10	TBD
Juno	JUNO	08/11/11	08/11/17	TBD
Mars Scout 2011 (TBS)	M11O	01/31/12	09/10/14	TBD
James Webb Space Telescope	JWST	06/01/13	07/31/16	TBD
Mars Science Orbiter 2013	M13O	11/28/13	08/21/16	TBD



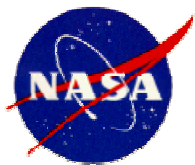
RESOURCE ALLOCATION REVIEW

Loading Study

DSN Major Downtimes by Date

– 2007 –

Site	Description	Start	End	Duration (days)	Week(s)	Start DOY	End DOY
DSS 63	Hydrostatic Bearing Replacement	06/12/2007	09/16/2007	97	24 - 37	163	259
DSS 63	Depot Level Maintenance - NIB	06/12/2007	09/16/2007	97	24 - 37	163	259
DSS 63	Load Sensors Install - NIB	06/12/2007	09/16/2007	97	24 - 37	163	259
DSS 45	Antenna Drive Cabinet Refurbishment	08/27/2007	09/30/2007	35	35 - 39	239	273
DSS 45	S-Band 200W U/L Install - NIB	08/27/2007	09/30/2007	35	35 - 39	239	273
DSS 45	Depot Level Maintenance - NIB	08/27/2007	11/18/2007	84	35 - 46	239	322
DSS 45	Antenna Controller Replacement	10/01/2007	11/18/2007	49	40 - 46	274	322
DSS 65	200W S-Band U/L	10/29/2007	12/10/2007	42	44 - 49	302	343
DSS 65	Depot Level Maintenance - NIB	10/29/2007	12/10/2007	42	44 - 49	302	343
DSS 43	Rescue Platform Install - Proposed	12/06/2007	12/09/2007	3	49 - 49	340	342

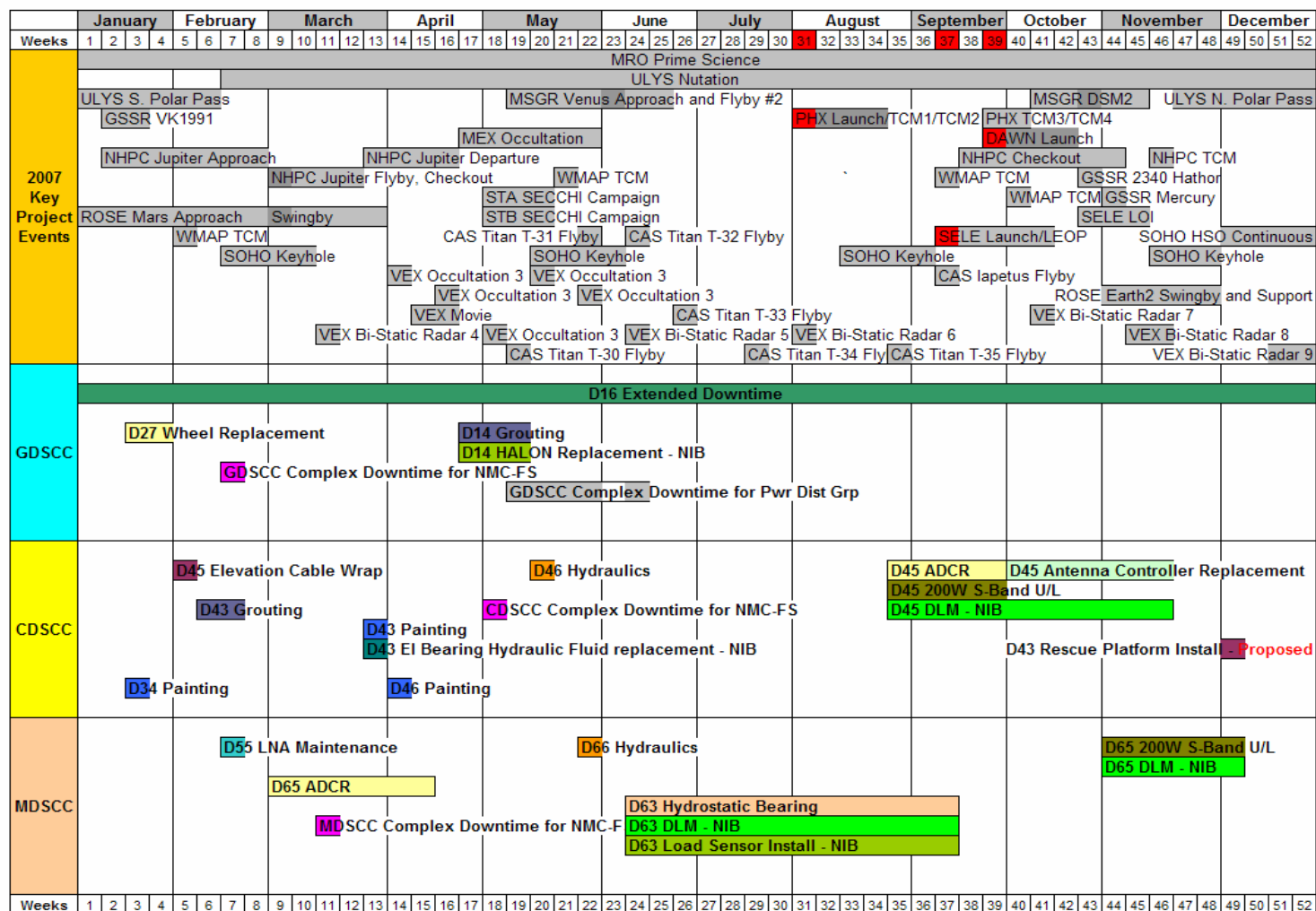


RESOURCE ALLOCATION REVIEW

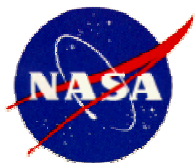
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DSN Major Downtimes by Date

– 2007 –



Revised: August 15, 2007



RESOURCE ALLOCATION REVIEW

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DSN Major Downtimes by Date

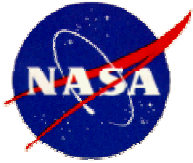
– 2008 –

Site	Description	Start	End	Duration (days)	Week(s)	Start DOY	End DOY
DSS 14	ACR S/W Install - Proposed	01/24/2008	02/03/2008	11	04 - 05	024	034
DSS 54	X/X-Ka Band Install	02/04/2008	05/11/2008	98	06 - 19	035	132
DSS 54	AZ Track Refurbishment - NIB	02/04/2008	05/11/2008	98	06 - 19	035	132
DSS 54	AZ Data Gear Replacement - NIB	02/04/2008	05/11/2008	98	06 - 19	035	132
DSS 54	Q-Band Installation - NIB	02/04/2008	05/11/2008	98	06 - 19	035	132
DSS 54	Depot Level Maintenance - NIB	02/04/2008	05/11/2008	98	06 - 19	035	132
DSS 15	Life Extension	02/18/2008	05/11/2008	84	08 - 19	049	132
DSS 15	Depot Level Maintenance - NIB	02/18/2008	05/11/2008	84	08 - 19	049	132
DSS 55	Paint Repair - Proposed	05/12/2008	06/23/2008	42	20 - 25	133	174
DSS 34	AZ Track Replacement - Proposed	06/16/2008	07/13/2008	28	25 - 28	168	195
DSS 34	Ka-Band Phase 2 Install	07/14/2008	09/29/2008	77	29 - 39	196	272
DSS 34	Depot Level Maintenance - NIB	07/14/2008	09/29/2008	77	29 - 39	196	272
DSS 43	Life Extension	09/29/2008	03/29/2009	182	40 - 13	273	088
DSS 43	Depot Level Maintenance – NIB	09/29/2008	03/29/2009	182	40 - 13	273	088



DSN Major Downtimes by Date

	January					February					March					April					May					June					July					August					September					October					November					December																																															
Weeks	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52																																																			
2008 Key Project Events	MRO Prime Science																																																																																																						
	ULYS N. Polar																																							NHPC Checkout																																																															
	ULYS Nutation																		GOES-O Launch																																																																																				
	CHDR Dark Current																										CHDR Dark Current																										CHDR Dark Current																																																		
	GSSR Ast 2001SN26																																							GSSR Ast 2003YE45																										GSSR Ast 1998UO1													GSSR Ast Toutatis																								
	GSSR Ast 4450Pan																																							GSSR Ast 1991VH																																																															
	MSGR Merc Flyby #1													MSGR DSM3													VEX Solar Corona																																							MSGR Merc Flyby #2													MSGR DSM4																								
	NHPC Maneuver													PHX TCM 3 TCM 4,5,6													PHX EDL																										ROSE Asteroid Flyby 1 Rhod													NHPC Maneuver																																					
	SOHO Keyhole																										SOHO Keyhole																										SOHO Keyhole																										SOHO Keyhole																								
	SOHO HSO Continuous													SOHO HSO Continuous													VEX Solar Corona																																							LRO Launch													LCROSS Launch																								
WMAP TCM																										WMAP TCM																																							WMAP TCM																										WMAP TCM												
GDS	D16 Extended Downtime																																																																																																						
														D15 Life Extension																																																																																									
														D15 DLM - NIB																																																																																									
	D14 Grouting																										D14 Grouting																										D14 Grouting																																																		
CDS	D14 ACR S/W - Proposed																																																																																																						
	D46 Extended Downtime																																																																																																						
	D43 Life Extension - Ending 03-29-2009																																																																																																						
MDS	D43 DLM - NIB																																																																																																						
														D34 AZ Track Replacement - Proposed																																																																																									
														D34 Ka-Band Phase 2																																																																																									
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MDS														D54 X/X-Ka Band																																																																	D66 Extended Downtime																								
														D54 AZ Track Refurb - NIB																																																																																									
														D54 AZ Data Gear Replacement - NIB																																																																																									
														D54 Q-Band Installation - NIB																																																																																									
														D54 DLM - NIB																																																																																									
Weeks	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52																																																			
	Revised: August 21, 2007																																																																																																						



RESOURCE ALLOCATION REVIEW

Loading Study

DSN Major Downtimes by Date

– 2009 –

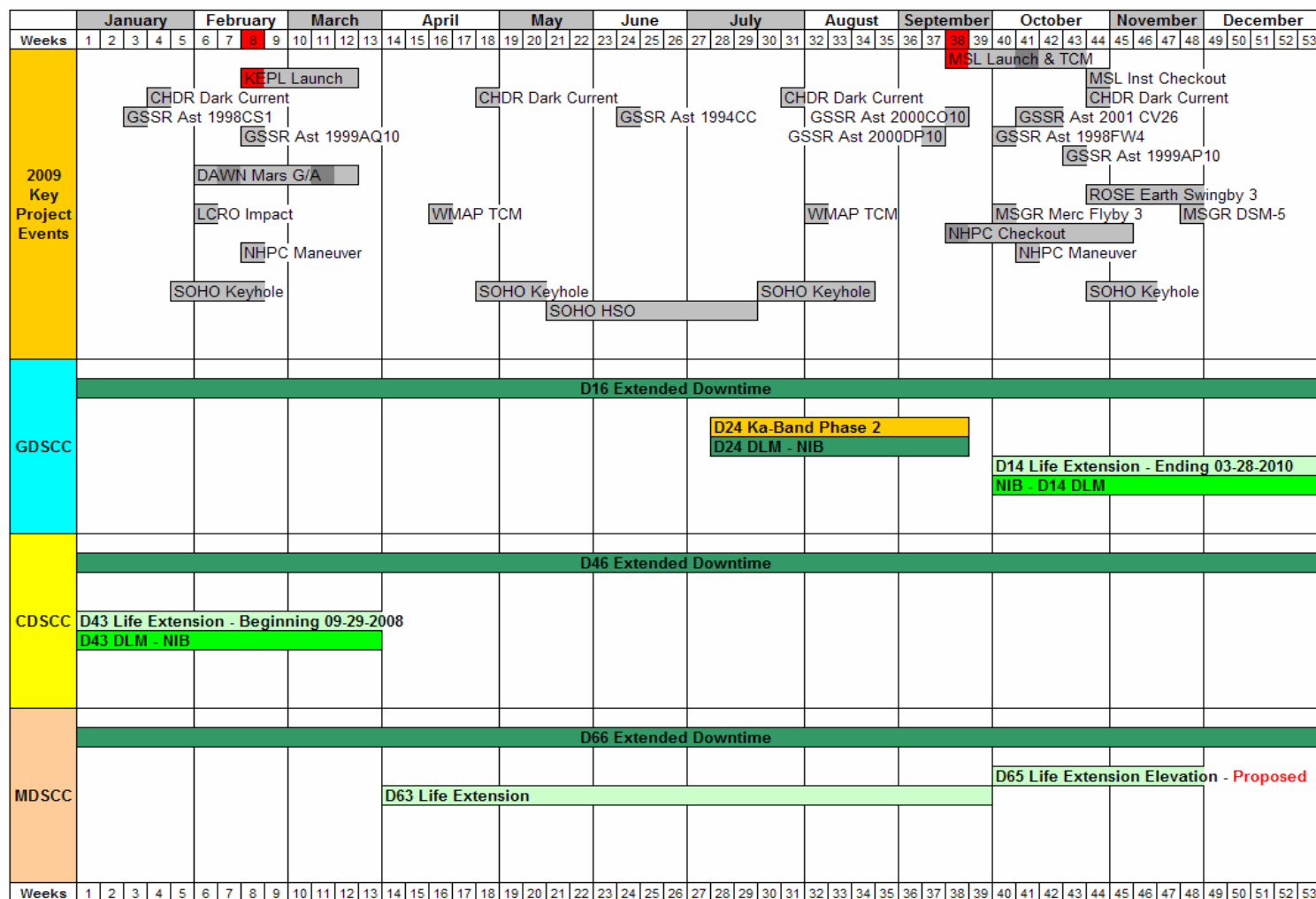
Site	Description	Start	End	Duration (days)	Week(s)	Start DOY	End DOY
DSS 63	Life Extension	03/30/2009	09/27/2009	182	14 - 39	089	270
DSS 24	Ka-Band Phase 2 Install	07/06/2009	09/21/2009	77	28 - 38	187	263
DSS 24	Depot Level Maintenance - NIB	07/06/2009	09/21/2009	77	28 - 38	187	263
DSS 14	Life Extension	09/28/2009	03/28/2010	182	40 - 12	271	087
DSS 65	Life Extension Elevation - Proposed	09/28/2009	11/29/2009	62	40 - 48	271	332



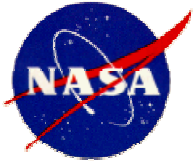
RESOURCE ALLOCATION REVIEW

Loading Study

DSN Major Downtimes by Date



Revised: August 17, 2007



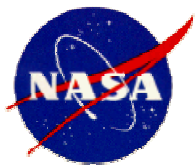
RESOURCE ALLOCATION REVIEW

Loading Study

DSN Major Downtimes by Date

– 2010 –

Site	Description	Start	End	Duration (days)	Week(s)	Start DOY	End DOY
DSS 54	Depot Level Maintenance - NIB	07/12/2010	09/27/2010	77	28 - 38	193	269
DSS 54	Ka-Band Phase 2 Install	07/12/2010	09/27/2010	77	28 - 38	193	269



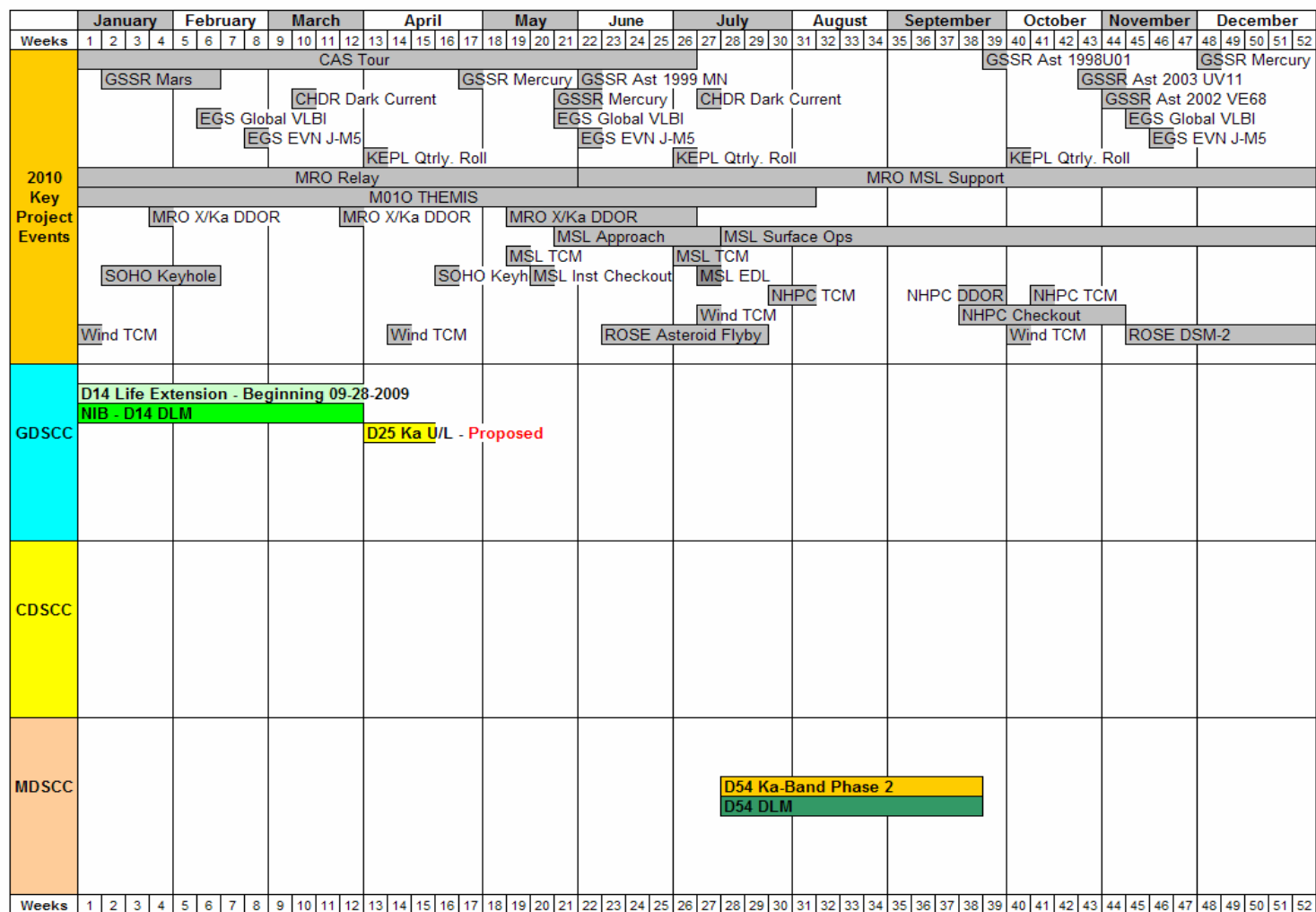
RESOURCE ALLOCATION REVIEW

Loading Study

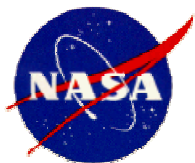
DSN Major Downtimes by Date



– 2010 –



Revised: April 2, 2007



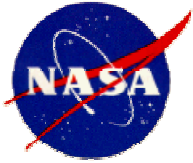
RESOURCE ALLOCATION REVIEW

Loading Study



IND Resource Implementation Planning Matrix

Complex	Station	Subnet	S-Band		X-Band		Ka-Band		Ka Phase 2
			Down	Up	Down	Up	Down	Up	
10	DSS-16	26M	✓	✓	N/A	N/A	N/A	N/A	N/A
40	DSS-46	26M	✓	✓	N/A	N/A	N/A	N/A	N/A
60	DSS-66	26M	✓	✓	N/A	N/A	N/A	N/A	N/A
10	DSS-27	34HSB	✓	✓	N/A	N/A	N/A	N/A	N/A
10	DSS-24	34B1	✓	✓	✓	✓	N/A	N/A	09/21/09
40	DSS-34	34B1	✓	✓	✓	✓	✓	N/A	09/29/08
60	DSS-54	34B1	✓	✓	✓	✓	04/15/08	N/A	09/27/10
10	DSS-25	34B2	N/A	N/A	✓	✓	✓	08/01/10	N/A
10	DSS-26	34B2	N/A	N/A	✓	✓	✓	N/A	N/A
60	DSS-55	34B2	N/A	N/A	✓	✓	✓	N/A	N/A
10	DSS-15	34HEF	✓	N/A	✓	✓	N/A	N/A	N/A
40	DSS-45	34HEF	✓	11/18/07	✓	✓	N/A	N/A	N/A
60	DSS-65	34HEF	✓	12/10/07	✓	✓	N/A	N/A	N/A
10	DSS-14	70M	✓	✓	✓	✓	N/A	N/A	N/A
40	DSS-43	70M	✓	✓	✓	✓	N/A	N/A	N/A
60	DSS-63	70M	✓	✓	✓	✓	N/A	N/A	N/A
N/A = Capability Not Planned xx/xx/xx = Capability Date Recently Changed As of: 08/16/07 ✓ ✓ ✓ = Capability Recently Exists ✓ = Capability Exists									



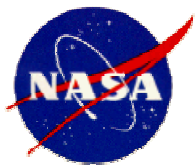
RESOURCE ALLOCATION REVIEW

Periods of Contention



<i>Legend</i>	
05 – 08	Indicates months that DO contain contentions to be resolved
18 – 22	Indicates months that DO NOT contain contentions to be resolved
01 – 04	Indicates months without contention

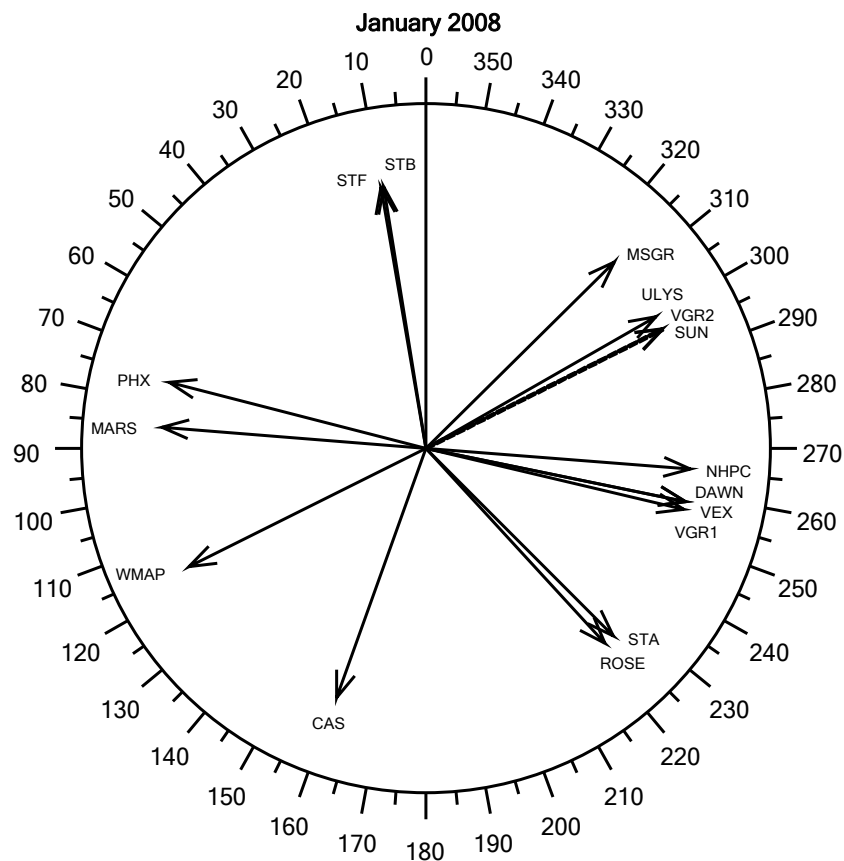
Month	Weeks		
	2008	2009	2010
January	01 – 05	01 – 05	01 – 05
February	06 – 09	06 – 09	06 – 09
March	10 – 13	10 – 13	10 – 13
April	14 – 17	14 – 18	14 – 18
May	18 – 22	19 – 22	19 – 22
June	23 – 26	23 – 26	23 – 26
July	27 – 31	27 – 31	27 – 31
August	32 – 35	32 – 35	32 – 35
September	36 – 39	36 – 39	36 – 39
October	40 – 44	40 – 44	40 – 44
November	45 – 48	45 – 48	45 – 48
December	49 – 52	49 – 53	49 – 53



RESOURCE ALLOCATION REVIEW

Spacecraft Right Ascension

July 15, 2007



THE SPACECRAFT RIGHT ASCENSION FIGURES SHOW THE POSITIONS OF THE SPACECRAFT IN THE SKY RELATIVE TO EACH OTHER ON THE 15TH OF EACH MONTH FOR THE YEAR INDICATED. RIGHT ASCENSION IS COMMONLY MEASURED IN HOURS, WITH 1 HOUR = 15 DEGREES.

THE ARROW INDICATES THE CENTER OF A SPACECRAFT VIEW FROM EARTH. EXTEND 60 DEGREES ON BOTH SIDES OF THE ARROW TO CALCULATE AN EIGHT (8) HOUR VIEW PERIOD.



RESOURCE ALLOCATION REVIEW

Events, Recommendations and Analyses

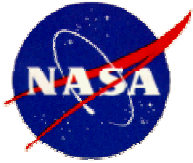


- ◆ **The Resource Allocation Review Redbook makes reference to monthly contention as low, moderate, severe, and extreme. The explanation of these terms is listed below.**

Projected unsupportable time is expressed as low, moderate, severe, or extreme in the Analysis sections of this document. Projected unsupportable time is an estimate of the amount of requested time, typically in percentage of requirements or modified requirements, that is unsupportable, based on resource availability, other users' requirements, assumed priorities, and view periods. The following percentages apply:

Low/Workable	= <20%
Moderate	= 20% to 30%
Severe	= 31% to 45%
Extreme	= >45%

Workable is a term used to express a condition wherein the projected unsupportable time is low. This condition occurs when the general forecasting analysis indicates a low percentage of unsupportable time or when agreements have been made to reduce contention to a workable level. Workable essentially means that experience has shown that the remaining contention may be solved during final schedule preparations and negotiations.

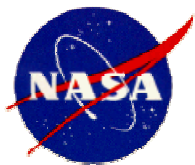


RESOURCE ALLOCATION REVIEW

Events, Recommendations and Analyses



2008 Events, Recommendations and Analyses

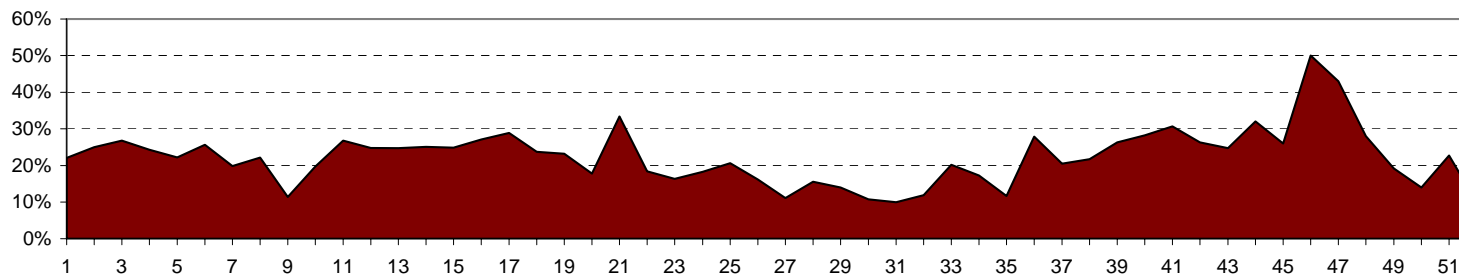


RESOURCE ALLOCATION REVIEW

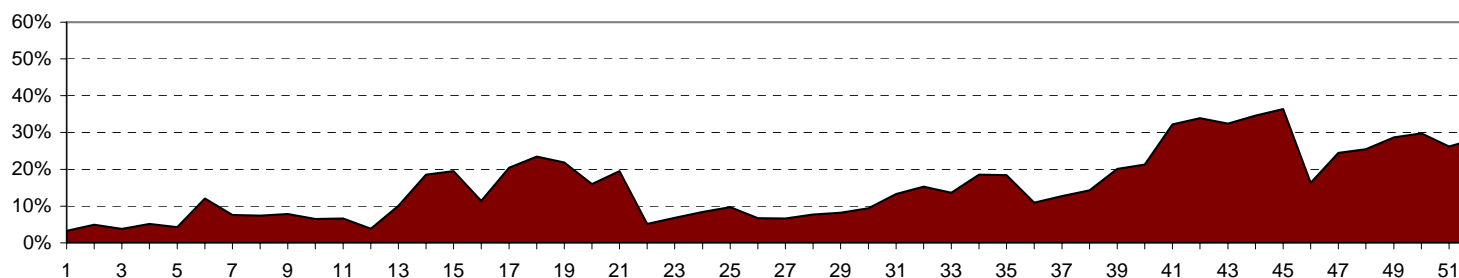
Events, Recommendations and Analyses

2008 Weekly Average User Unsupportable Time

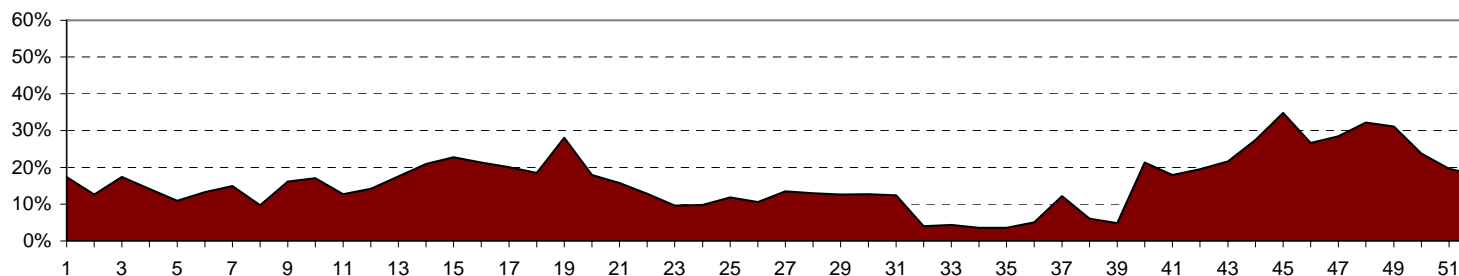
70M



34HEF



34BWG1



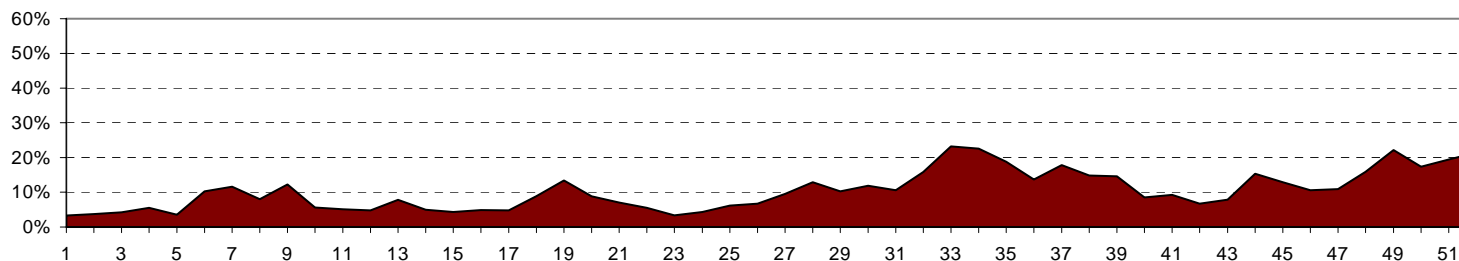


RESOURCE ALLOCATION REVIEW

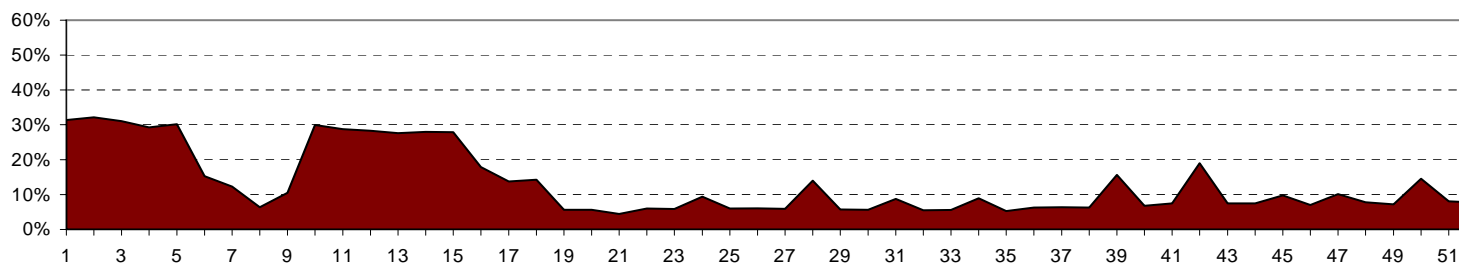
Events, Recommendations and Analyses

2008 Weekly Average User Unsupportable Time

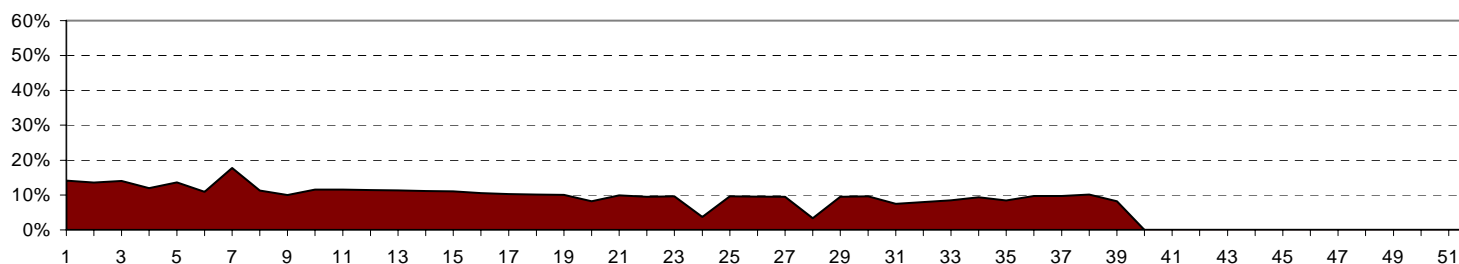
34BWG2

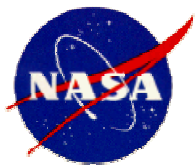


34HSB



26M

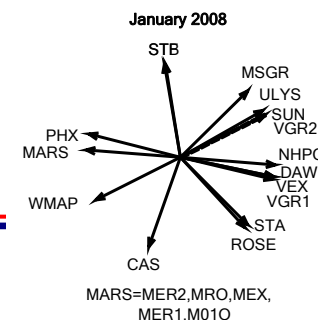




RESOURCE ALLOCATION REVIEW

Events, Recommendations and Analyses

2008 – January (Weeks 01 - 05)



EVENTS

DSS-14 proposed downtime for Antenna Controller Replacement Software in weeks 04 – 05

Cassini Tour

Chandra Earth Eclipse ends in week 01, Lunar Eclipse in week 04

Dawn Cruise Thrust ends in week 05, Delta DOR in weeks 02, 04

EPOXI Earth Flyby; TCM in weeks 03, 04

GSSR Mars in weeks 01 – 04, Mercury in week 04, Mercury GBT in week 01

Mars Reconnaissance Orbiter Prime Science/M01O Themis; X/Ka-DDOR in weeks 01, 05

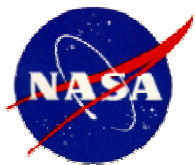
Mars Odyssey Delta DOR in week 03

Messenger Delta DOR in weeks 01 – 04, TCM in weeks 02 – 04, Mercury Flyby #1 begins week 03 – 07

Phoenix Delta DOR

SGP Crustal Dynamics H-M4 in weeks 02 and 04, B-M4 in week 03, W-M4 in weeks 03 and 04

SOHO HSO ending in week 05



RESOURCE ALLOCATION REVIEW

Events, Recommendations and Analyses

2008 – January (Weeks 01 - 05) (Continued)

EVENTS

Stereo Ahead HGA CAL in week 02, SECCHI Campaign in weeks 02 – 03

Stereo Behind HGA CAL in week 02, SECCHI Campaign in weeks 02 – 03

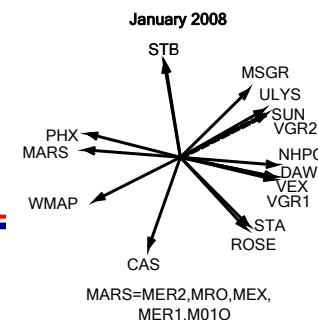
Ulysses Nutation

Voyager 1 MAGROL Overlay in weeks 01 – 02, DTR Array in week 02, MAGROL on DOY 032

Voyager 2 GYROS ON in week 03, HYBIC Swap in week 04, BLF in week 03

WIND TCM in week 02

WMAP Maneuver in week 04





RESOURCE ALLOCATION REVIEW

Events, Recommendations and Analyses

2008 – January (Weeks 01 - 05) (continued)

RECOMMENDATIONS

DSS approve proposed DSS-14 ACR beginning in week 04 (01/24/08) and ending in week 05 (02/03/08)

ACE move all passes from DSS-27,66 to DSS-24,54. (3)

CHDR move all passes from DSS-27,66 to DSS-24,54. (3)

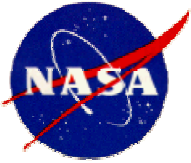
M01O Mapping MSPA 7 passes at 70M with MRO Prime Science 3 passes at DSS-25,34,55 and 4 passes at 70M. (1)

MRO Prime Science MSPA 3 standalone passes at DSS-25,34,55 and 4 standalone passes at 70M with M01O Mapping at 70M. (1)

POLR Playback move 18 of 28 passes from DSS-27,46,66 to 34H. (3)

VGR2 reduce passes to 6 hours. (2)

WIND move 3 passes from 34B1 to DSS-45. (2)



RESOURCE ALLOCATION REVIEW

Events, Recommendations and Analyses

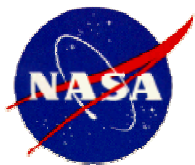
2008 – January (Weeks 01 - 05) (continued)



ANALYSES

1. (70M) The overlap between Mars and Sun Earth L2 (WMAP) are nearly 100%.
2. (34BWG1) The projected unsupportable time is moderate to extreme for DSS Maintenance, MSGR Cruise and VGR2 routine support.
3. (34HSB) The SOHO HSO overloads the antenna.

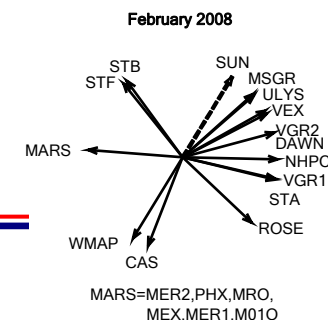
Contention levels on the 34H, 34BWG2, and 26M subnets are workable and should resolve during final schedule preparations and negotiations



RESOURCE ALLOCATION REVIEW

Events, Recommendations and Analyses

2008 – February (Weeks 06 - 09)



EVENTS

DSS-14 approved downtime (Quarterly Grouting) in week 06

DSS-15 approved downtime (Life Extension) beginning in week 08

DSS-54 approved downtime (X/X-Ka Band Install) beginning in week 06

ATOT A01 Astrometry in week 07

Cassini Tour

EGS Calibration in week 09

MESSENGER Mercury Flyby #1 in weeks 06 – 07, TCM in week 06

SOHO Keyhole in weeks 06 - 09, Maneuver in week 08

Ulysses Nutation

Dawn Cruise; Delta DOR in weeks 06, 08

GSSR Asteroid 2001 SN26 in week 06, Asteroid 4450 Pan in weeks 07 – 08

Mars Odyssey Delta DOR in week 07

Phoenix Delta DOR

Polar TCM in week 07

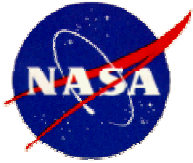
SGP Crustal Dynamics B-M4 in week 06

Voyager 2 MAGROL Overlay in week 06

9/20/2007

Preliminary

1.0 – 35



RESOURCE ALLOCATION REVIEW

Events, Recommendations and Analyses

2008 – February (Weeks 06 - 09) (continued)



RECOMMENDATIONS

None



RESOURCE ALLOCATION REVIEW

Events, Recommendations and Analyses

2008 – February (Weeks 06 - 09) (continued)



ANALYSES

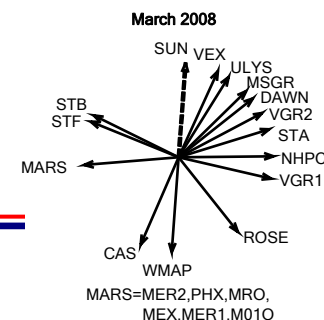
Contention levels on the 70M, 34H, 34BWG1, 34BWG2, 34HSB and 26m subnets are workable and should resolve during final schedule preparations and negotiations



RESOURCE ALLOCATION REVIEW

Events, Recommendations and Analyses

2008 – March (Weeks 10 - 13)



EVENTS

DSS-54 approved downtime (X/X-Ka Band Install)

DSS-15 approved downtime (Life Extension)

SPC-60 Proposed Complex-Wide downtime (Commercial Power Installation)

Cassini Tour

Chandra ACA Dark Current Measurement in week 10

Dawn Cruise; Delta DOR in weeks 10, 12

EGS EVN J-M5 in weeks 10, 12; Global VLBI in week 11

GSSR Mercury in week 12

Hayabusa MUSES-C Orbit Determination in week 11

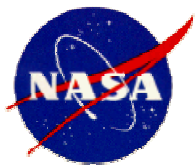
Mars Odyssey Delta DOR in week 11

Mars Reconnaissance Orbiter X/Ka Delta DOR in week 13, Prime Science/M010 Themis

MESSENGER DSM-3 in week 12

Phoenix Delta DOR, Approach begin in week 13, Delta DOR

SGP Crustal Dynamics W-M4 in weeks 10 and 13, B-M4 in week 11



RESOURCE ALLOCATION REVIEW

Events, Recommendations and Analyses

2008 – March (Weeks 10 - 13) (Continued)

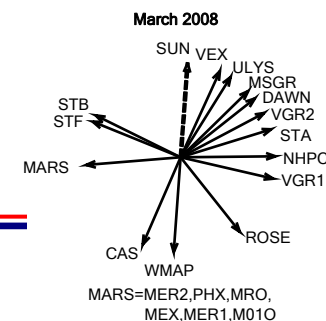
EVENTS

SOHO HSO beginning in week 10

Voyager 1 MAGROL on DOY 072

Voyager 2 ASCAL in week 11, XB High Power in week 10, XB Low Power in week 12,
MAGROL on DOY 073

Wind TCM in week 12





RESOURCE ALLOCATION REVIEW

Events, Recommendations and Analyses

2008 – March (Weeks 10 - 13) (continued)

RECOMMENDATIONS

Approve proposed SPC-60 Complex-Wide downtime beginning in week 12, Saturday – Sunday 36-Hours in week 12 and Sunday and Monday 12-hours per day in week 13

ACE move all passes from DSS-27,66 to 34B1. (2)

CHDR move all passes from DSS-27 to 34B1. (2)

M01O Mapping move 4 passes on 70M to MSPA with MRO Prime Science on 70M. (1)

MRO Prime Science move 4 passes on 70M to MSPA with M01O Mapping on 70M. (1)

POLR move 18 Playback passes from DSS-27,46,66 to 34H. (2)

VGR2 reduce 8 hour passes to 6 hours. (1)



RESOURCE ALLOCATION REVIEW

Events, Recommendations and Analyses

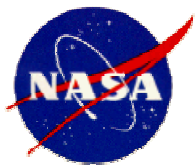
2008 – March (Weeks 10 - 13) (continued)



ANALYSES

1. (70M) The projected unsupportable time is moderate to extreme for DSS Maintenance, Mars and VGR2 routine support.
2. (34HSB) The SOHO HSO overloads the antenna.

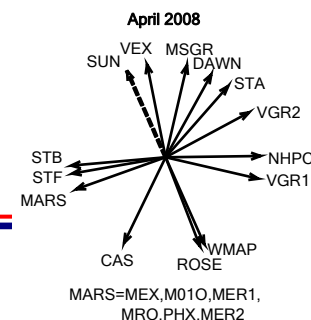
Contention levels on the 34H, 34BWG1, 34BWG2 and 26M subnets are workable and should resolve during final schedule preparations and negotiations.



RESOURCE ALLOCATION REVIEW

Events, Recommendations and Analyses

2008 – April (Weeks 14 - 17)



EVENTS

DSS-54 approved downtime (X/X-Ka Band Install)

DSS-15 approved downtime (Life Extension)

SPC-60 Proposed Complex-Wide downtime (Commercial Power Installation)

Cassini Tour

Dawn Cruise; Delta DOR in weeks 14, 16

Mars Odyssey Delta DOR in week 16; Relay

Mars Reconnaissance Orbiter Prime Science/M010 Themis ends in week 17; X/Ka-Delta DOR in week 17

MESSENGER TCM in week 17

Phoenix Approach, Delta DOR, and TCM in week 15

SGP Crustal Dynamics B-M4 in week 15

SOHO HSO

Stereo Ahead HGA CAL in week 14

Stereo Behind HGA CAL in week 14

Voyager 1 MAGROL Overlay in week 14

Voyager 2 MAGROL on DOY 114



RESOURCE ALLOCATION REVIEW

Events, Recommendations and Analyses

2008 – April (Weeks 14 - 17) (continued)

RECOMMENDATIONS

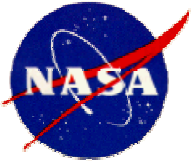
Approve proposed SPC-60 Complex-Wide downtime ending in week 15, Sunday and Monday 12-hours per day in weeks 14 - 15

ACE move 5 of 7 passes from DSS-27,66 to 34B1. (2)

M01O Mapping MSPA 4 70M passes with MRO Prime Science on 70M in weeks 14-17. (1)

MRO Prime Science MSPA 4 70M passes with M01O Mapping on 70M in weeks 14-17. (1)

POLR move 18 of 28 Playback passes from DSS-27,46,66 to 34H in weeks 14 and 15 and 4 of 8 passes from DSS-27,46,66 to 34H in week 16. (2)



RESOURCE ALLOCATION REVIEW

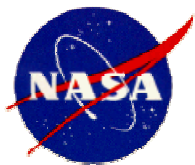
Events, Recommendations and Analyses

2008 – April (Weeks 14 - 17) (continued)

ANALYSES

1. (70M) The projected unsupportable time is moderate to extreme for DSS Maintenance and Mars missions.
2. (34HSB) The projected unsupportable time is moderate to extreme for ACE, DSS Maintenance, and POLR Playback in weeks 14-16.

Contention levels on the 34H, 34BWG1, 34BWG2, and 26M subnets are workable and should resolve during final schedule preparations and negotiations.



RESOURCE ALLOCATION REVIEW

Events, Recommendations and Analyses

2008 – May (Weeks 18 - 22)

EVENTS

DSS-54 approved downtime (X/X-Ka Band Install) ending in week 19

DSS-15 approved downtime (Life Extension) ending in week 19

DSS-55 proposed downtime (Paint Repair) beginning in week 20

ATOT A01 Image in week 18

Cassini Tour

Dawn Cruise; Delta DOR in weeks 18, 21, 22

EGS Calibration in week 21, EVN J-M5 in week 22

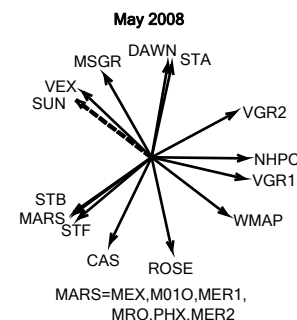
GSSR Mercury in week 20, GODR in week 22

Mars Odyssey Phoenix Relay begins in week 19 ; Themis in week 18, Delta DOR in week 20

Mars Express Orbital Science, Phoenix Relay beginning in week 21

Mars Reconnaissance Orbiter Prime Science/ M01O Relay in week 21, X/Ka-Delta DOR in week 21

NHPC Maneuver in weeks 21, 22





RESOURCE ALLOCATION REVIEW

Events, Recommendations and Analyses

2008 – May (Weeks 18 - 22) (Continued)

EVENTS

Phoenix Approach; Delta DOR in weeks 18 – 21, TCM in weeks 19 – 21, EDL in week 22

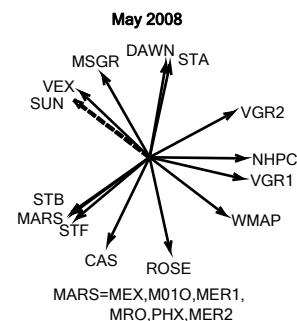
SGP Crustal Dynamics W-M4 in week 18, B-M4 in week 20, W-M4 in week 21

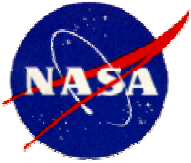
SOHO HSO ends in week 18, Keyhole in weeks 19 – 21, Maneuver in weeks 21 – 22

Venus Express Solar Corona begins week 19 – 28

Voyager 1 ASCAL in week 18, MAGROL on DOY 123

Voyager 2 MAGROL Overlay in week 19, BLF in week 18





RESOURCE ALLOCATION REVIEW

Events, Recommendations and Analyses

2008 – May (Weeks 18 - 22) (continued)



RECOMMENDATIONS

DSS approve proposed DSS-55 Paint Repair beginning in week 20

ACE move 2 of 7 passes from DSS-27, 66 to 34B1 in week 18. (2)

CHDR move 7 of 21 passes from 34B1 to DSS-27 in week 18. (2)

M01O Relay MSPA 7 of 14 passes in week 19, 21 and 22, and 5 of 12 passes in week 20 at 34B1,34B2 with MRO Prime Science DSS-25,34,55. Delete remaining 7 passes at 34B1,34B2. (1,2)

MRO Prime Science MSPA 7 passes in weeks 19, 21 and 22, and 5 passes in week 20 at DSS-25,34,55 with M01O Relay. (1,2)

PHX Approach reduce 70M portion of 10 70M/34B1 8-hour passes to 6 hours, change remaining 4 70M/34B1 passes to standalone passes on 34B1 in week 21. (1)

WIND move 2 of 7 passes from 34B1 to DSS-45 in weeks 18,19. (2)



RESOURCE ALLOCATION REVIEW

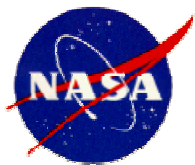
Events, Recommendations and Analyses

2008 – May (Weeks 18 - 22) (continued)

ANALYSES

1. (70M) The projected unsupportable time is moderate to extreme for DSS Maintenance, M01O, MEX, MRO, Phoenix Mars Approach phase, SOHO Keyhole, STF, and WMAP. Contention is due to Phoenix continuous 70M requirements and Oversubscription of MARS view by M01O, MRO and MEX.
2. (34B1) The projected unsupportable time is moderate to severe for CHDR Dark Current, DIF, DSS Maintenance, M01O Relay, MRO, PHX, STA, STB, ULYS, VGR2 and WIND. Contention is primarily due to PHX Mars Approach and is compounded by the DSS-55 downtime.

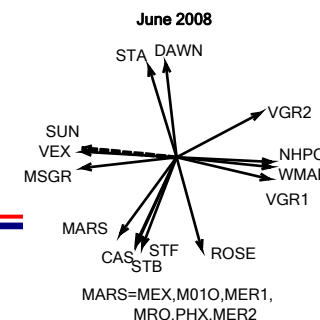
Contention levels on the 34H, 34B2, 34HSB and 26M subnets are workable and should resolve during final schedule preparations and negotiations.



RESOURCE ALLOCATION REVIEW

Events, Recommendations and Analyses

2008 – June (Weeks 23 - 26)



EVENTS

DSS-14 approved downtime (Quarterly Grouting) in week 25

DSS-55 proposed downtime (Paint Repair) ending in week 25

DSS-34 proposed downtime (AZ Track Replacement) beginning in week 25

Cassini Tour

Chandra Earth Eclipse in weeks 24 - 26

Dawn Cruise Thrust; Delta DOR in weeks 24 and 26, Instrument Check out in weeks 23 – 24

EGS Calibration in week 24, EVN J-M5 in week 23

GSSR Mercury in week 23, GODR in weeks 24 and 26, Mercury GBT in week 25

Hayabusa MUSES-C Orbit Determination in week 24

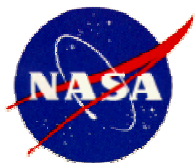
Mars Odyssey Phoenix Relay

Mars Express Orbital Occultation Phoenix Relay

Mars Reconnaissance Orbiter Prime Science; X/Ka-DDOR in week 25

SGP Crustal Dynamics H-M4 in week 23, W-M4 in week 25, B-M4 in week 26

SOHO TSO in week 24



RESOURCE ALLOCATION REVIEW

Events, Recommendations and Analyses

2008 – June (Weeks 23 - 26) (Continued)

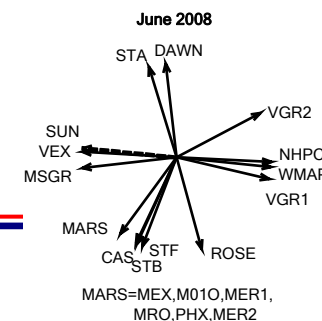
EVENTS

Venus Express Solar Corona

Voyager 2 MAGROL on DOY 166

Wind TCM in week 24

WMAP Maneuver in week 23





RESOURCE ALLOCATION REVIEW

Events, Recommendations and Analyses

2008 – June (Weeks 23 - 26) (continued)

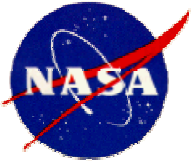
RECOMMENDATIONS

DSS approve proposed DSS-34 Azimuth Track Replacement downtime beginning in week 25. (2)

DSS approve proposed DSS-55 Paint Repair downtime ending in week 25. (3)

M01O Relay delete 7 passes at DSS-26,45,54. M01O relay at 70M MSPA 7 of 7 passes with MRO Prime Science at DSS-25,34,55 and move to DSS-26,45,54. (1,2,3)

MRO Prime Science at DSS-25,34,55 MSPA 7 of 7 passes with M01O relay at 70M and move to DSS-26,45,54. (1,2,3)



RESOURCE ALLOCATION REVIEW

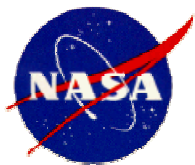
Events, Recommendations and Analyses

2008 – June (Weeks 23 - 26) (continued)

ANALYSES

1. (70M) The projected unsupportable time is moderate for M01O, MEX, MRO and PHX in this period due to oversubscription of the MARS viewperiod during PHX Mars Approach and EDL.
2. (34BWG1) The projected unsupportable time is Low/Workable in this period for all missions.
3. (34BWG2) The projected unsupportable time is Low/Workable in this period for all missions.

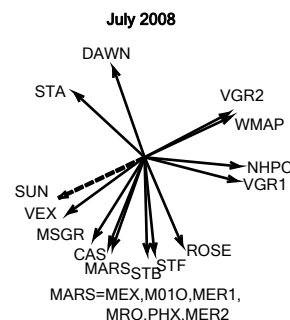
Contention levels on the 70M, 34HEF 34HSB and 26M subnets are workable and should resolve during final schedule preparations and negotiations.



RESOURCE ALLOCATION REVIEW

Events, Recommendations and Analyses

2008 – July (Weeks 27 - 31)



EVENTS

DSS-34 proposed downtime (AZ Track Replacement) ending in week 28

DSS-34 approved downtime (Ka Band Phase 2 Install) beginning in week 29

Cassini Tour

Chandra ACA D/C Measurement in week 27

Dawn Cruise Thrust; Delta DOR in weeks 28 and 30

GSSR Mercury GBT in week 27, GODR in weeks 28 and 30, Asteroid 2003 YE45 in weeks 28 – 29, Mercury in week 30 - 31

Mars Odyssey Phoenix Relay

Mars Express Orbital Occultation, Phoenix Relay

Mars Reconnaissance Orbiter Prime Science X/Ka-DDOR in week 29

Messenger Delta DOR in weeks 30 - 32

SGP Crustal Dynamics H-M4 in week 28, B-M4 in week 30, W-M4 in week 31

SOHO Keyhole begins week 31, TSO in week 28

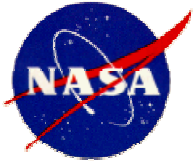
Stereo Ahead HGA CAL in week 28

Stereo Behind HGA CAL in week 28

9/20/2007

Preliminary

1.0 – 53



RESOURCE ALLOCATION REVIEW

Events, Recommendations and Analyses

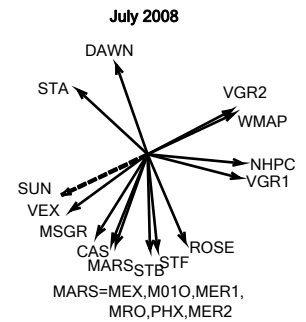
2008 – July (Weeks 27 - 31) (Continued)

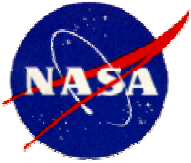
EVENTS

Venus Express Solar Corona ends in week 28

Voyager 1 MAGROL Overlay in week 27, MAGROL on DOY 215

Voyager 2 BLF in week 31





RESOURCE ALLOCATION REVIEW

Events, Recommendations and Analyses

2008 – July (Weeks 27 - 31) (continued)

RECOMMENDATIONS

DSS approve proposed DSS-34 Azimuth Track Replacement downtime. (2)

M01O Relay delete 7 passes at DSS-26,45,54. M01O relay at 70M MSPA 7 of 7 passes with MRO Prime Science at DSS-26,34,55 and move to DSS-26,45,54. (1,2,3)

MRO Prime Science at DSS-26,34,55 MSPA 7 of 7 passes with M01O relay at 70M and move to DSS-26,45,54. (1,2,3)



RESOURCE ALLOCATION REVIEW

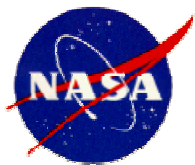
Events, Recommendations and Analyses

2008 – July (Weeks 27 - 31) (continued)

ANALYSES

1. (70M) The projected unsupportable time is moderate for M01O, MEX, MRO and PHX in this period due to oversubscription of the MARS viewperiod during PHX Mars Approach and EDL.
2. (34BWG1) The projected unsupportable time is Low/Workable in this period for all missions.

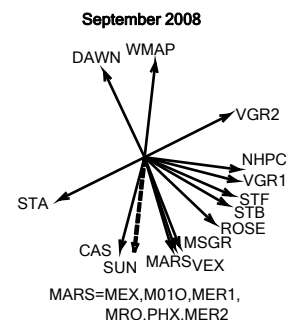
Contention levels on the 70M, 34BWG2, 34HEF 34HSB and 26M subnets are workable and should resolve during final schedule preparations and negotiations.



RESOURCE ALLOCATION REVIEW

Events, Recommendations and Analyses

2008 – September (Weeks 36 - 39)



EVENTS

ATOT A01 Astrometry in week 37

Cassini Tour

DAWN DDOR in weeks 36, 38 and 39

EPOXI DDOR in weeks 36 and 38, TCM

GSSR Asteroid 2000 DP10 in week 37 and Asteroid 1998 UO1 in week 38 and 39

Mars Odyssey Phoenix Relay

Mars Express Orbital Occultation, Phoenix Relay

MRO Ka Ops Demo, X/Ka-DDOR in week 37

MSGR Delta DOR in week 36 and 37 and TCM in week 36 and 38

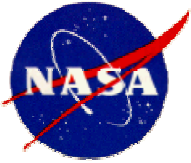
Rosetta Asteroid Rhod Flyby

SOHO TSO in week 39

Voyager 1 MAGROL in week 38

Voyager 2 ASCAL in week 37 and MAGROL in week 37

WIND TCM in week 37



RESOURCE ALLOCATION REVIEW

Events, Recommendations and Analyses

2008 – September (Weeks 36 - 39)

RECOMMENDATIONS

M01O Relay delete 7 passes at 70M.



RESOURCE ALLOCATION REVIEW

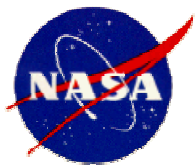
Events, Recommendations and Analyses

2008 – September (Weeks 36 - 39)

ANALYSES

1. (70M) The projected unsupportable time is moderate for M01O, MEX, MRO and PHX in this period due to oversubscription of the MARS viewperiod during PHX Mars Approach and EDL.

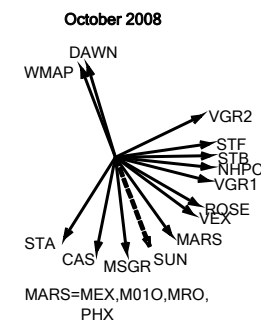
Contention levels on the 34BWG1, 34BWG2, 34HEF 34HSB and 26M subnets are workable and should resolve during final schedule preparations and negotiations.



RESOURCE ALLOCATION REVIEW

Events, Recommendations and Analyses

2008 – October (Weeks 40 - 44)



EVENTS

DSS-43 approved downtime (Life Extension) beginning in week 40

DSS-46 approved downtime (Extended Downtime) beginning in week 40

DSS-66 approved downtime (Extended Downtime) beginning in week 40

Cassini Tour

Dawn Cruise Coasting; Delta DOR

EXPOxI Approach begins in week 41

EGS Calibration in week 42, EVN J-M5 in week 43, Global VLBI in week 44

LCRO Transfer Cruise in weeks 44 – 45

LRO Launch and Early Orbit Phase week 44

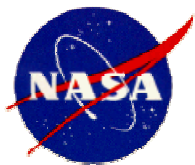
Mars Odyssey Relay

Mars Express Orbital Occultation/ M01O Relay

Mars Reconnaissance Orbiter Prime Science/M01O Relay; X/Ka Delta DOR in week 41

Messenger Delta DOR and Mercury Flyby #2 in weeks 41 – 42, TCM in weeks 41, 44

NHPC Checkout, Delta DOR in weeks 40 – 41, Maneuver in week 41



RESOURCE ALLOCATION REVIEW

Events, Recommendations and Analyses

2008 – October (Weeks 40 - 44) (Continued)

EVENTS

SGP Crustal Dynamics B-M4 in week 42, W-M4 in week 43, H-M4 in week 44

SOHO TSO in week 42

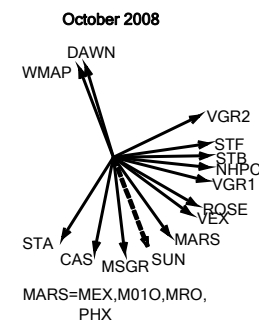
Stereo Ahead HGA CAL in week 40

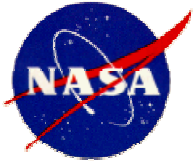
Stereo Behind HGA CAL in week 40

Voyager 1 MAGROL Overlay in week 40, DTR Array in week 43, ASCAL in week 44,
MAGROL on DOY 305

Voyager 2 BLF in week 44, MAGROL on DOY 296

WMAP Maneuver in week 41





RESOURCE ALLOCATION REVIEW

Events, Recommendations and Analyses

2008 – October (Weeks 40 - 44) (continued)



RECOMMENDATIONS

DSS Maintenance delete 1 of 2 maintenance blocks at DSS-14 in each week 41 and 44. (1,4)

EGS Global VLBI move 24-hour Array support from week 44 to week 39. (1,4)

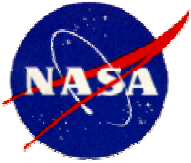
M01O Relay MSPA with MRO Prime Science at DSS-14,63 change 3 of 3 passes to standalone passes and delete M01O passes. M01O Relay delete 4 passes week at DSS-26,45,54 and DSS-14,63. M01O Relay MSPA with MRO Prime Science move from DSS-25,34,55 to DSS-25,55. M01O Relay MSPA with MEX Orbital Science/Occultation move 7 passes from 34H,70M to 34H,DSS-25,55 in weeks 41 and 44. (1,3,4)

MEX Orbital Science/Occultation MSPA with M01O Relay move 7 passes from 34H,70M to 34H,DSS-25,55 in weeks 41 and 44. (1,4)

MRO Prime Science MSPA with M01O Relay at DSS-14,63 change 3 of 3 passes to standalone passes and delete M01O passes. MRO Ka Ops Demo move from DSS-25,34,55 to DSS-25,55. MRO Prime Science MSPA with M01O Relay move from DSS-25,34,55 to DSS-25,55. (3,4)

NHPC Maneuver move support from week 41 at DSS-14,63 to week 38 at 70M. (1)

SOHO Move 8-hour and 9.6-hour supports from DSS-27,45,65 to DSS-24,27,45,54,65 in weeks 41 – 44. SOHO TSO move support from DSS-27,45,65 to DSS-24,27,45,54,65 in week 42. (2,4)



RESOURCE ALLOCATION REVIEW

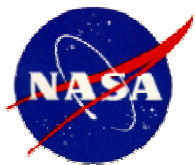
Events, Recommendations and Analyses

2008 – October (Weeks 40 - 44) (continued)

ANALYSES

1. (70M) The projected unsupportable time is moderate to severe for CAS, CLU2, DSS Maintenance, EGS, M010 Relay, MRO Prime Science, MSGR TCM, NHPC Checkout, STF and VGR1 ASCAL, DTR Array and MAGROL. Contention is due to significant view period overlap of most missions, reduced Southern Hemisphere capacity, MSGR Flyby 2 and NHPC Maneuver.
2. (34HEF) The projected unsupportable time is moderate to severe for ACE, CLU2, DSS Maintenance, LCRO, MEX, MSGR, SOHO and VGR2. Contention is due to significant view period overlap of most missions, reduced Southern Hemisphere capacity and SOHO TSO.
3. (34BWG1) The projected unsupportable time is moderate to severe for ACE, CLU2, DSS Maintenance, MRO, STA and VGR2. Contention is due to significant view period overlap of most missions and reduced Southern Hemisphere capacity.
4. (SPC40) Supportability and capacity are reduced during the DSS-43 Life Extension downtime and DSS-46 decommissioning. Support from 70 meter antennas and remaining Canberra 34 meter antennas is limited. A severe viewperiod overlap exists with most DSN missions in this period increasing oversubscription of remaining assets.

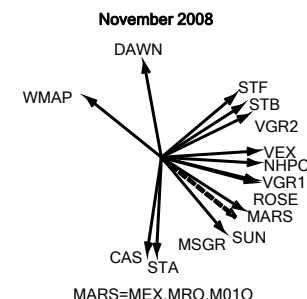
Contention levels on the 34BWG2 and 34HSB subnets are workable and should resolve during final schedule preparations and negotiations



RESOURCE ALLOCATION REVIEW

Events, Recommendations and Analyses

2008 – November (Weeks 45 - 48)



EVENTS

DSS-43 approved downtime (Life Extension)
DSS-46 approved downtime (Extended Downtime)
DSS-66 approved downtime (Extended Downtime)

Cassini Tour

Chandra ACA Dark Current Measure in week 45, Leonid Pass in week 48

Dawn Cruise Coasting and Delta DOR

EPOXI Approach ends in week 47, TCM in week 45, Encounter with Comet Boethin begins in week 48

EGS EVN J-M5 in week 45

GBRA Host Country in week 48

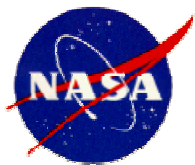
GSSR Astrometry 4179 Toutatis in weeks 46 – 47

LCRO Orbit Cruise; Transfer Cruise ends in week 45

Mars Odyssey Relay

Mars Express Orbital Occultation/M01O Relay

Mars Reconnaissance Orbiter Prime Science/M01O Relay ends in week 47, Solar Conjunction begins in week 47, X/Ka-Delta DOR in week 45



RESOURCE ALLOCATION REVIEW

Events, Recommendations and Analyses

2008 – November (Weeks 45 - 48) (Continued)

EVENTS

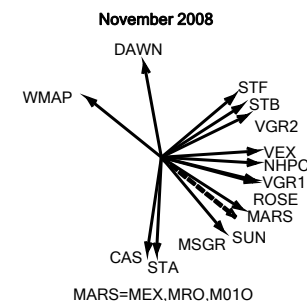
New Horizons Checkout ends in week 46

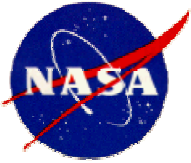
NExT Earth Gravity Assist, beginning in week 47

SGP Crustal Dynamics W-M4 in week 46, B-M4 in week 47, H-M4 in week 48

SOHO Keyhole in weeks 45 - 47, Keyhole Maneuver in week 46

Voyager 2 MAGROL Overlay in week 45





RESOURCE ALLOCATION REVIEW

Events, Recommendations and Analyses



2008 – November (Weeks 45 - 48) (continued)

RECOMMENDATIONS

CAS Tour move 2 passes at DSS-14 to DSS-24 in week 46 and move 5 of 5 passes from DSS-15,45,55 to DSS-15,25,55,65 in week 45. (1,4)

M01O Relay at DSS-14,63 delete 7 of 7 passes in weeks 45 and 46 and 6 of 7 in week 47.

M01O Relay at DSS-14,63 move remaining 1 of 7 passes to DSS-14,15,63 and MSPA with MEX R/S Solar Corona at 70M in week 47 and 4 of 7 passes in week 48 and move to HEF. M01O Relay MSPA with MRO Prime Science at DSS-14,63 change to standalone and delete 3 M01O Relay passes and move 3 of 3 standalone MRO Prime Science passes to 34HEF in week 45 and 46. M01O Relay MSPA with MRO Prime Science move 2 of 6 passes to 34HEF in week 47. M01O Relay at DSS-26,45,54, MSPA with MRO Solar Conjunction at DSS-25,34,55 6 of 7 passes in week 47 and 7 of 7 passes in week 48 and move to DSS-26,55. M01O Relay MSPA with MRO Prime Science move from DSS-25,34,65 to DSS-25,65 in weeks 45 and 46. M01O Relay MSPA with MRO Prime Science move from DSS-25,34,55 to 34B2 in weeks 45 and 46. (1,4)

MEX R/S Solar Corona at 34HEF and 70M move 7 of 7 passes to DSS-14,15,63 MSPA with 1 with M01O Relay at DSS-14,63 in week 48. (1,4)



RESOURCE ALLOCATION REVIEW

Events, Recommendations and Analyses



2008 – November (Weeks 45 - 48) (continued)

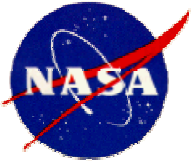
RECOMMENDATIONS

MRO Prime Science MSPA with M01O Relay at DSS-14,63 change to standalone and delete M01O Relay passes and move 3 of 3 standalone MRO Prime Science passes to 34HEF in week 45 and 46. MRO Prime Science MSPA with M01O Relay at DSS-14,63 move 2 of 6 passes to 34HEF in week 47. MRO Ka Ops Demo move 2 passes from DSS-25,34,55 to 34B2. MRO Solar Conjunction at DSS-25,34,55, MSPA with M01O Relay at DSS-26,45,54 6 of 7 passes in week 47 and 7 of 7 passes in week 48 and move to DSS-26,55. MRO Prime Science MSPA with M01O Relay move from DSS-25,34,65 to DSS-25,65 in weeks 45 and 46. MRO Prime Science MSPA with M01O Relay move from DSS-25,34,55 to 34B2 in weeks 45 and 46. (1,2,3,4)

SOHO Keyhole delete 4 of 8 passes at DSS-15/27,54/65,34/45 in weeks 46 and 47 and 4 of 7 passes at DSS-14/27,63/65 in week 46. SOHO move 4 of 4 8-hour passes from DSS-27,45,65 to DSS-27,54,65 in week 45 and move 2 of 2 9.6-hour passes in week 45 and 7 of 7 passes in week 48 from DSS-27,45,65 to DSS-27,54,65 in week 45. (1,2,3,4)

STB Prime Science move 6 of 7 passes from DSS-26,34,54 to DSS-26,54 and remaining 1 pass to DSS-34. (3,4)

VGR2 delete 3 of 5 passes at DSS-34,45 in weeks 45 and 48. (2,3,4)



RESOURCE ALLOCATION REVIEW

Events, Recommendations and Analyses

2008 – November (Weeks 45 - 48) (continued)

ANALYSES

1. (70M) The projected unsupportable time is moderate to extreme for CLU2, DSS Maintenance, Cassini Tour, GSSR Asteroid 4179 Toutatis, M01O Relay, MEX R/S Solar Corona, MRO Prime Science, NHPC Checkout and Cruise/Telemetry, SOHO Keyhole and STF. Contention is due to significant view period overlap of most missions, reduced Southern Hemisphere capacity, GSSR Asteroid and SOHO Keyhole.
2. (34HEF) The projected unsupportable time is moderate to extreme for ACE, CLU2, EPOXI, DSS Maintenance, M01O, MEX, MRO, MSGR Cruise, SOHO and VGR2. Contention is due to significant view period overlap of most missions, reduced Southern Hemisphere capacity EPOXI Approach, Encounter DDOR and TCM, NEXT EGA and SOHO Keyhole.
3. (34BWG1) The projected unsupportable time is moderate to extreme for ACE, CAS Tour, CLU2, EPOXI, DSS Maintenance, IMAG, M01O, MEX, MRO, MSGR, SOHO STA, STB, STF, VGR2 and WMAP. Contention is due to significant view period overlap of most missions, reduced Southern Hemisphere capacity EPOXI Approach, Encounter DDOR and TCM, NEXT EGA and SOHO Keyhole.
4. (SPC40) Supportability and capacity are reduced during the DSS-43 Life Extension downtime and DSS-46 decommissioning. Support from 70 meter antennas and remaining Canberra 34 meter antennas is limited. A severe viewperiod overlap exists with most DSN missions in this period increasing oversubscription of remaining assets.



RESOURCE ALLOCATION REVIEW

Events, Recommendations and Analyses

2008 – November (Weeks 45 - 48) (continued)



ANALYSES

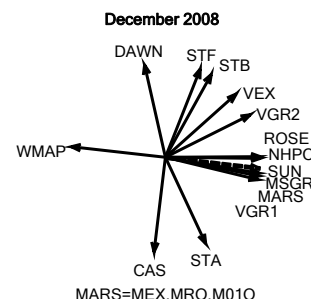
Contention levels on the 34BWG2 and 34HSB subnet is workable and should resolve during final schedule preparations and negotiations



RESOURCE ALLOCATION REVIEW

Events, Recommendations and Analyses

2008 – December (Weeks 49 - 52)



EVENTS

DSS-43 approved downtime (Life Extension)

DSS-46 approved downtime (Extended Downtime)

DSS-66 approved downtime (Extended Downtime)

Cassini Tour

Chandra Earth Eclipse in weeks 50 – 52

Dawn Cruise Coast and Delta DOR

EPOXI Encounter with comet Boethin ends in week 50, TCM in week 50, Playback in weeks 51 – 52

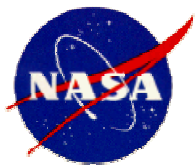
Hayabusa MUSES-C Orbit Determination in week 51

LCRO Orbit Cruise

Mars Odyssey Relay

Mars Express Orbital Occultation/M010 Relay

Mars Reconnaissance Orbiter Relay in week 52, Solar Conjunction ending in week 51, X/Ka-Delta DOR in week 52



RESOURCE ALLOCATION REVIEW

Events, Recommendations and Analyses

2008 – December (Weeks 49 - 52) (Continued)

EVENTS

Messenger DSM-4 in week 49

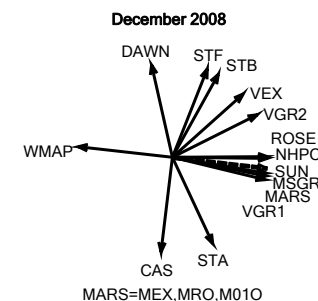
New Horizons Maneuver in weeks 50 – 51, Solar Conjunction in weeks 51 – 52

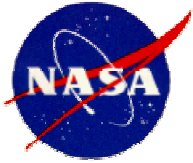
NExT Earth Gravity Assist; TCM in weeks 50 & 51

SGP Crustal Dynamics H-M4 in week 50, B-M4 and W-M4 in week 51

SOHO TSO in week 50

Wind TCM in week 50





RESOURCE ALLOCATION REVIEW

Events, Recommendations and Analyses



2008 – December (Weeks 49 - 52) (continued)

RECOMMENDATIONS

DIF Encounter move 17 of 17 8-hour passes at DSS-26,34,54 to DSS-25,26,34,54 in week 49. (3,4)

GSSR Venus GBT move 3 of 3 supports from DSS-14 from DOY 336 – 338 in week 49 to DOY 347 – 349 of week 50. (1,4)

SOHO TSO delete 3 of 15 passes and move remaining 12 from DSS-27,45,65 to DSS-27,45,65,34B1. (2,3,4)

M01O Relay at 34H,34B2 MSPA with MEX R/S Solar Corona at 34H and move to DSS-15,65. (2,4)

MEX R/S Solar Corona at 34H MSPA with M01O Relay at 34H,34B2 and move to DSS-15,65. (2,4)

STB move 7 of 7 passes at DSS-26,34,54 to DSS-26,55 in week 49 and 50. (3,4)

VGR2 Delete 2 of 7 passes in week 49 and 50. (3,4)

MRO Solar Conjunction move from DSS-25,34,55 to DSS-25,55. (3,4)



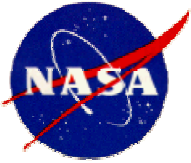
RESOURCE ALLOCATION REVIEW

Events, Recommendations and Analyses

2008 – December (Weeks 49 - 52) (continued)

ANALYSES

1. (70M) The projected unsupportable time is moderate to severe for CLU2, DSS Maintenance, EPOXI Encounter, GSSR Venus GBT, M01O Relay, MEX Orbital Science, MSGR DSM-4, MUSC Orbit Determination and NHPC Maneuver and Cruise/Telemetry. Contention is due to significant view period overlap of most missions, reduced Southern Hemisphere capacity, EPOXI Encounter, GSSR Venus GBT, MUSC and NHPC Maneuver.
2. (34HEF) The projected unsupportable time is moderate to extreme for CLU2, DSS Maintenance, M01O, MEX, MSGR, SOHO, VGR2 and Wind. Contention is due to significant view period overlap of most missions, reduced Southern Hemisphere capacity M01O Relay, MEX Solar Corona and SOHO TSO.
3. (34BWG1) The projected unsupportable time is moderate to extreme for ACE, CLU2, EPOXI, DSS Maintenance, MRO, MSGR, STA, STB, STF, VGR2 and WMAP. Contention is due to significant view period overlap of most missions, reduced Southern Hemisphere capacity EPOXI Encounter and Playback, MRO Solar Conjunction and NEXT EGA.
4. (SPC40) Supportability and capacity are reduced during the DSS-43 Life Extension downtime and DSS-46 decommissioning. Support from 70 meter antennas and remaining Canberra 34 meter antennas is limited. A severe viewperiod overlap exists with most DSN missions in this period increasing oversubscription of remaining assets.



RESOURCE ALLOCATION REVIEW

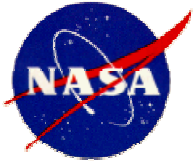
Events, Recommendations and Analyses

2008 – December (Weeks 49 - 52) (continued)



ANALYSES

Contention levels on the 34BWG2 and 34HSB subnet is workable and should resolve during final schedule preparations and negotiations

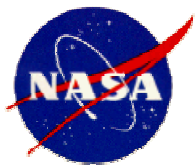


RESOURCE ALLOCATION REVIEW

Events, Recommendations and Analyses



2009 Events, Recommendations and Analyses

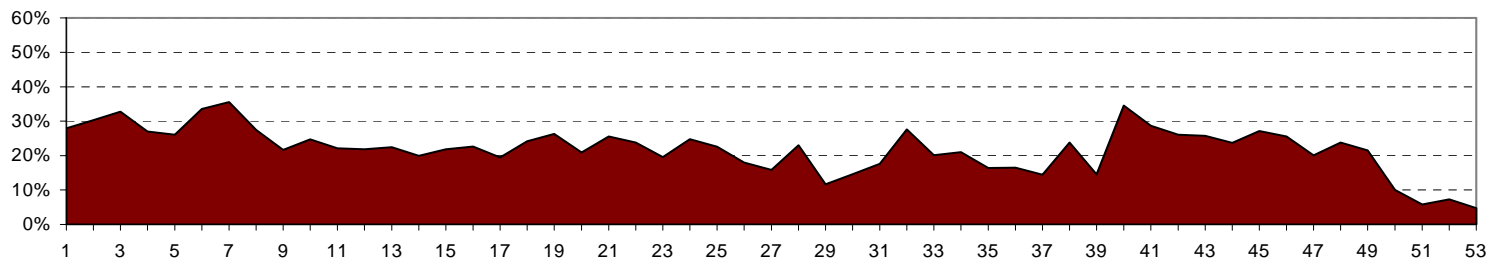


RESOURCE ALLOCATION REVIEW

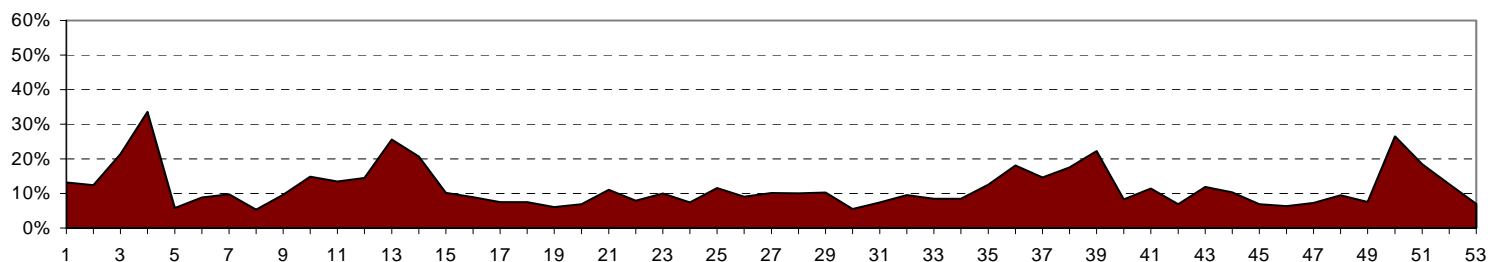
Events, Recommendations and Analyses

2009 Weekly Average User Unsupportable Time

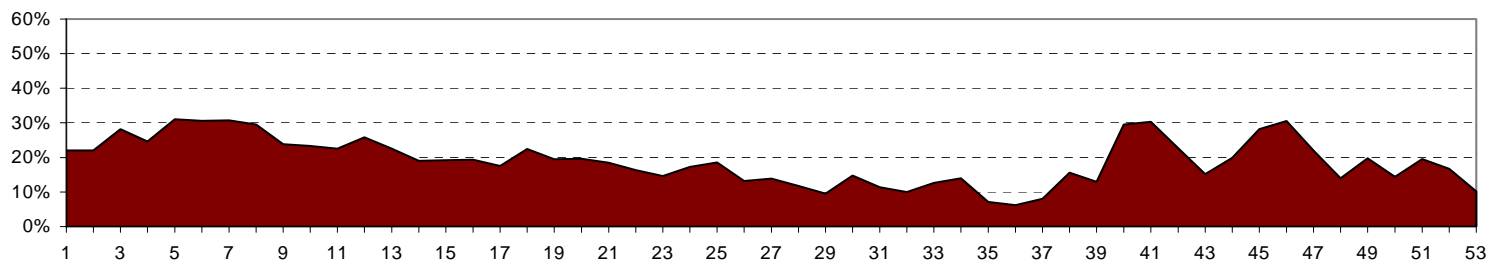
70M

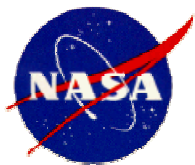


34HEF



34BWG1



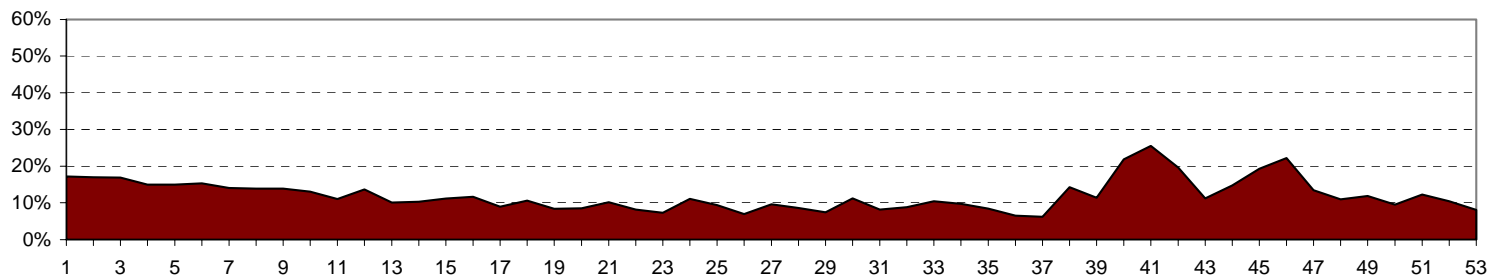


RESOURCE ALLOCATION REVIEW

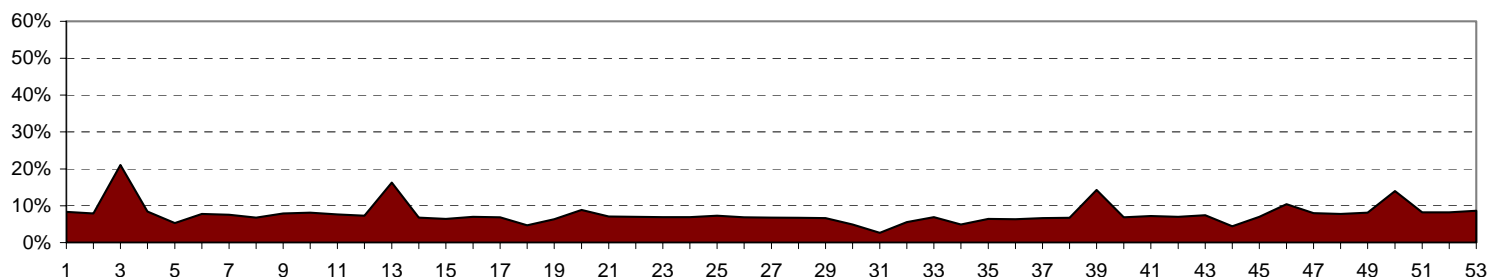
Events, Recommendations and Analyses

2009 Weekly Average User Unsupportable Time

34BWG2



34HSB

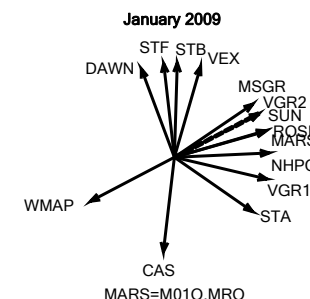




RESOURCE ALLOCATION REVIEW

Events, Recommendations and Analyses

2009 – January (Weeks 01 - 05)



EVENTS

DSS-46 approved downtime (Extended Downtime)

DSS-66 approved downtime (Extended Downtime)

DSS-43 approved downtime (Life Extension)

CASSINI Tour

DAWN Delta DOR and Mars G/A

EPOXI Playback in week 01

GBRA Host Country in weeks 02, 04

GSSR Asteroid 1998 CS1 in weeks 03 – 04, GODR in week 01, 03, 05, Mercury GBT in week 03

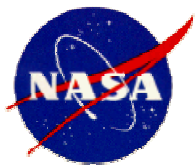
LCRO Impact Target in week 05

Mars Reconnaissance Orbiter Relay

MESSENGER TCM in week 03

NExT Earth Gravity Assist, TCM-2 in week 02, Swingby on DOY 013

NHPC Cruise/Telemetry in week 02



RESOURCE ALLOCATION REVIEW

Events, Recommendations and Analyses

2009 – January (Weeks 01 - 05) (Continued)

EVENTS

SGP Crustal Dynamics H-M4 in week 02, B-M4 in week 03, W-M4 in week 04

SOHO TSO in week 03, Keyhole beginning in week 05

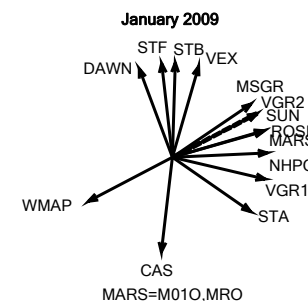
Stereo Ahead HGA CAL in week 02

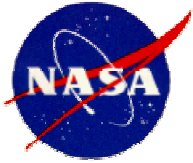
Stereo Behind HGA CAL in week 02

Voyager 1 SEQ A070 U/L, D/L CONF, U/L BU and D/L CONF BU in week 02

Voyager 2 BLF D/L in week 05 – 06

WMAP Maneuver in week 05 - 06





RESOURCE ALLOCATION REVIEW

Events, Recommendations and Analyses

2009 – January (Weeks 01 - 05) (continued)



RECOMMENDATIONS

M01O Mapping at DSS-14,63, MSPA with MRO Relay at DSS-25,26,34,55, 7 of 7 passes at DSS-14,63. (1,2)

MRO Relay at DSS-25,26,34,55, MSPA with M01O Mapping at DSS-14,63, 7 of 7 passes and move to DSS-14,63 and increase from 8 hours to 10 hours. MRO Relay Complimentary at DSS-25,26,34,54,55, MSPA with MEX Orbital Science at DSS-14,15, 7 of 7 passes and move to DSS-25,26,34,54,55 in weeks 01 – 02 and to 34HEF in weeks 03 - 05. (1,2)

MEX Orbital Science at DSS-14,15, MSPA with MRO Relay Complimentary at DSS-25,26,34,54,55, 7 of 7 passes at DSS-25,26,34,54,55 in weeks 01 – 02 and to 34HEF in weeks 03 - 05. (1,2)

MSGR Cruise Move 3 of 3 passes at DSS-26,34,54 to DSS-25,26,54 in weeks 03 - 05. (2)

SDU EGA move 10 of 10 passes from 34B1 to 34B1,34B2 in week 03. (2)

SOHO Keyhole delete 4 of 12 passes at 34B1 in week 05. (2)

VGR2 reduce support at DSS-34,45 from 8 to 6 hours in weeks 03 – 05. (2)



RESOURCE ALLOCATION REVIEW

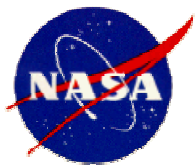
Events, Recommendations and Analyses

2009 – January (Weeks 01 - 05) (continued)

ANALYSES

1. (70M) The projected unsupportable time is moderate to severe for CLU2, DSS Maintenance, GSSR Asteroid 1998 CS1 and Mercury GBT, M01O Mapping, MEX Orbital Science, SOHO Keyhole, STF and VGR1. Contention is due to significant view period overlap of most missions, reduced Southern Hemisphere capacity, GSSR Asteroid 1998 CS1.
2. (34BWG1) The projected unsupportable time is moderate to severe for ACE, DSS Maintenance, INTG, LCRO Approach and Impact, MRO Relay and Relay Complimentary, MSGR. SDU Earth Gravity Assist and TCM, SOHO Keyhole, STA, VGR2 and WIND. Contention is due to significant view period overlap of most missions and reduced Southern Hemisphere capacity SDU EGA and TCM, LCRO Approach and Impact and SOHO Keyhole.
3. (SPC40) Supportability and capacity are reduced during the DSS-43 Life Extension downtime and DSS-46 decommissioning. Support from 70 meter antennas and remaining Canberra 34 meter antennas is limited. A severe viewperiod overlap exists with most DSN mission in this period increasing oversubscription of remaining assets.

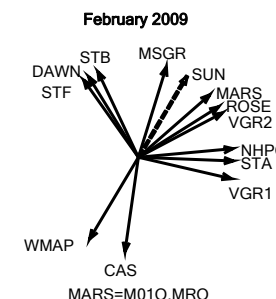
Contention levels on the 34HEF, 34BWG2 and 34HSB subnets are workable and should resolve during final schedule preparations and negotiations



RESOURCE ALLOCATION REVIEW

Events, Recommendations and Analyses

2009 – February (Weeks 06 - 09)



EVENTS

DSS-46 approved downtime (Extended Downtime)

DSS-66 approved downtime (Extended Downtime)

DSS-43 approved downtime (Life Extension)

CASSINI Tour

DAWN DDOR and Mars G/A

EGS Calibration and EVN J-M5 in week 07, Global VLBI in week 08

GBRA Host Country in weeks 06 – 09

GSSR GODR in weeks 05, 07 & 09, Asteroid 1999AQ10 in weeks 07 – 08

LCRO Impact in week 06, DOY 036

Mars Reconnaissance Orbiter X/Ka-DDOR in week 08, and Relay

NExT Earth Gravity Assist, ending in week 09

New Horizons Cruise/Telemetry in week 06

SGP Crust Dynamics B-M4 in week 06, H-M4 in week 08

SOHO Keyhole Maneuver in week 06, Keyhole ends week 08

Voyager 1 MAGROL on DOY 037

Voyager 2 BLF D/L week 06, SEQ D/L and D/L BU in week 07

9/20/2007

Preliminary

1.0 – 82



RESOURCE ALLOCATION REVIEW

Events, Recommendations and Analyses

2009 – February (Weeks 06 - 09) (continued)

RECOMMENDATIONS

M01O Mapping at DSS-14,63, MSPA with MRO Relay at DSS-25,26,34,55, 7 of 7 passes at DSS-14,63. (1,2)

MRO Relay at DSS-25,26,34,55, MSPA with M01O Mapping at DSS-14,63, 7 of 7 passes and move to DSS-14,63 and increase from 8 hours to 10 hours. MRO Relay Complimentary at DSS-25,26,34,54,55, MSPA with MEX Orbital Science at DSS-14,15, 7 of 7 passes and move to 34HEF. (1,2)

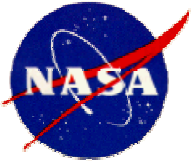
MEX Orbital Science at DSS-14,15, MSPA with MRO Relay Complimentary at DSS-25,26,34,54,55, 7 of 7 passes at 34HEF. (1,2)

MSGRC Cruise Move 3 of 3 passes at DSS-26,34,54 to DSS-15,65. (2)

SDU EGA Post Nav move passes from 34B1 to 34B2. (2)

SOHO Keyhole delete 4 of 12 passes at 34B1 in week 09 and move support at DSS-14/27,34/45,63/65 to DSS-14/27,63/65. (2)

VGR2 delete 2 of 7 passes, move support at DSS-34,45 to DSS-45 and reduce from 8 to 6 hours. (2)



RESOURCE ALLOCATION REVIEW

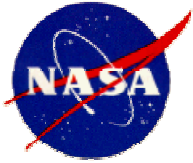
Events, Recommendations and Analyses

2009 – February (Weeks 06 - 09) (continued)

ANALYSES

1. (70M) The projected unsupportable time is moderate to severe for CLU2, DSS Maintenance, EGS, GSSR Asteroid 1999 AQ10, M01O Mapping, MEX Orbital Science, SOHO Keyhole, STF and VGR1. Contention is due to significant view period overlap of most missions, reduced Southern Hemisphere capacity, Oversubscription in the MARS viewperiod, SOHO Keyhole.
2. (34BWG1) The projected unsupportable time is moderate to severe for ACE, CLU2, DSS Maintenance, LCRO Impact Targeting, MRO Relay and Relay Complimentary, MSGR, SDU Earth Gravity Assist, SOHO Keyhole, STA, STB, STF, VGR2 and WIND. Contention is due to significant view period overlap of most missions and reduced Southern Hemisphere capacity Dawn Mars Gravity Assist, KEPL LEOP, LCRO, Impact Targeting, SDU Earth Gravity Assist and SOHO Keyhole.
3. (SPC40) Supportability and capacity are reduced during the DSS-43 Life Extension downtime and DSS-46 decommissioning. Support from 70 meter antennas and remaining Canberra 34 meter antennas is limited. A severe viewperiod overlap exists with most DSN mission in this period increasing oversubscription of remaining assets.

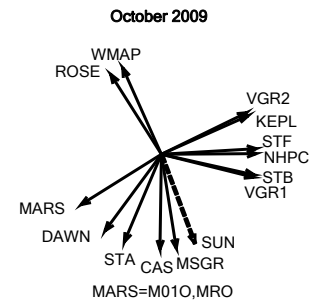
Contention levels on the 34HEF, 34BWG2 and 34HSB subnets are workable and should resolve during final schedule preparations and negotiations



RESOURCE ALLOCATION REVIEW

Events, Recommendations and Analyses

2009 – October (Weeks 40 - 44)



EVENTS

DSS-46 approved downtime (Extended Downtime)

DSS-66 approved downtime (Extended Downtime)

DSS-14 approved downtime (Life Extension)

DSS-65 proposed downtime for Life Extension Elevation in weeks 40 - 48

CASSINI Tour

Dawn Cruise; DDOR in weeks 41 and 43

EGS Calibration and EVN J-M5 in week 43

GBRA Host Country in weeks 40, 42 – 44

M010 THEMIS beginning in week 40

Mars Reconnaissance Orbiter Relay in weeks 40 – 43, X/Ka-DDOR in week 40

MESSENGER DDOR in weeks 40 – 41, Mercury FB3 in weeks 40 – 41, TCM in weeks 40 and 43

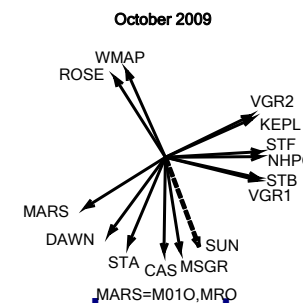
MSL Launch Support in weeks 40 – 42, ACS / NAV Cal and TCM in week 40, ACS / NAV Cout and FS C/01 in week 41, DDOR beginning in week 42, Inst C/O 1 in weeks 44 – 45



RESOURCE ALLOCATION REVIEW

Events, Recommendations and Analyses

2009 – October (Weeks 40 - 44) (Continued)



New Horizons Checkout beginning in week 40, DDOR in week 40 – 41, Maneuver in week 42

Rosetta Earth Swingby beginning in week 44

SGP Crust Dynamics B-M4 in week 42, W-M4 in week 43, H-M4 in week 44

SOHO Keyhole beginning in week 44 - 47

Stereo Ahead HGA CAL in week 40

Stereo Behind HGA CAL in week 40

Voyager 1 MAGROL Overly in week 41, MAGROL Array beginning in week 44

Voyager 2 BLF beginning in week 44, MAGROL on DOY 301

Wind TCM in week 40

WMAP End of Extended Mission on DOY 273



RESOURCE ALLOCATION REVIEW

Events, Recommendations and Analyses

2009 – October (Weeks 40 - 44) (continued)



RECOMMENDATIONS

DSS-65 approve proposed downtime for Life Extension beginning in week 40.

DSS Maintenance delete one 6-hour maintenance period in weeks 40,41 and 42. (1)

GBRA Host Country Move support from week 40 to week 43. (3)

M01O THEMIS 10-hour passes at DSS-43,63, MSPA 7 of 14 passes with MEX Orbital Science at DSS-14,15 and move to DSS-15,45 and MSPA with MRO Relay Comp at DSS-25,26,34,54,55 remaining 7 passes at DSS-43,63 and reduce all 14 passes to 8 hours. (1,2,3)

MEX Orbital Science at DSS-14,15, MSPA 7 of 7 passes with M01O THEMIS 10-hour passes at DSS-43,63 and move to DSS-15,45. (1,2)

MRO Relay Comp at DSS-25,26,34,54,55 MSPA 7 of 7 passes with M01O THEMIS 10-hour passes at DSS-43,63. MRO Relay passes at DSS-25,26,34,55 and DSS-25,26,45,55 Move to DSS-24,25,55. (1,2,3)

MSGR Mercury FB3 move 10 of 10 passes at 70M to DSS-24,43,63 in week 40 and 4 of 4 passes at DSS-43,63 to DSS-24,43,63 in week 41. MSGR Cruise at 34H move support to DSS-15,45,55 and move support at DSS-26,45,65 to DSS-26,45,55. MSGR Delta DOR move support from DSS-15\65,15\45 to DSS-15\55,15\45 (1,2)

MSL Launch Support move from DSS-26,34,54 to 34B1,34B2 in weeks 40 – 42. (3)



RESOURCE ALLOCATION REVIEW

Events, Recommendations and Analyses

2009 – October (Weeks 40 - 44) (continued)

RECOMMENDATIONS

NHPC Delta DOR move support from DSS-15\65,15\45 to DSS-15\55,15\45 (1,2)

SOHO move 9.6-hour passes from DSS-27,45,65 to DSS-27,54 and move 1.6 hour passes from DSS-27,45,65 to DSS-27,45,54. (2)

STA Extended Science move from DSS-26,34,55 to 34B2. (3)

STB Extended Science move from DSS-26,34,54 to 34B2. (3)

VGR2 move support at DSS-43,45,34 to DSS-43,45 in weeks 40 – 42 (3)



RESOURCE ALLOCATION REVIEW

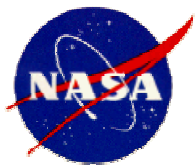
Events, Recommendations and Analyses

2009 – October (Weeks 40 - 44) (continued)

ANALYSES

1. (70M) The projected unsupportable time is moderate to severe for CLU2, DSS Maintenance, M010 THEMIS, MRO Relay Complimentary, MSGR Mercury Flyby 3 and TCM, MSL TCM, NHPC Checkout and Maneuver, STF and VGR1 MAGROL Overlay. Contention is due to significant view period overlap of most missions, DSS-14 and DSS-65 downtime, MSGR Mercury Flyby 3 and MSL Launch support.
2. (34HEF) The projected unsupportable time is moderate to severe for CLU2, DSS Maintenance, MEX, MRO, SOHO and VGR2. Contention is due to significant view period overlap of most missions and DSS-14 and DSS-65 downtime.
3. (34BWG1) The projected unsupportable time is moderate to severe for ACE, CLU2, CAS Tour, CHDR, DSS Maintenance, GBRA Host Country, IMAG, MRO, MSL, STA, STF, VGR2 and WIND. Contention is due to significant view period overlap of most missions and DSS-14 and DSS-65 downtime and MSL Launch Support.

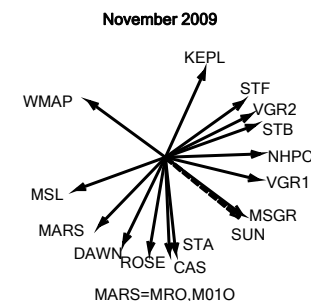
Contention levels on the 34BWG2 and 34HSB subnets are workable and should resolve during final schedule preparations and negotiations



RESOURCE ALLOCATION REVIEW

Events, Recommendations and Analyses

2009 – November (Weeks 45 - 48)



EVENTS

DSS-46 approved downtime (Extended Downtime)

DSS-66 approved downtime (Extended Downtime)

DSS-14 approved downtime (Life Extension)

DSS-65 proposed downtime for Life Extension Elevation ending in week 48

Cassini Tour

Chandra ACA D/C Measurement in week 45

Dawn Cruise; DDOR in weeks 45 & 47

EGS Global VLBI in week 45

GBRA Host Country in weeks 45 – 48

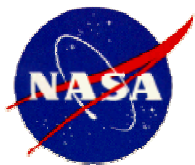
M010 THEMIS

Mars Reconnaissance Orbiter Relay; X/Ka-DDOR in week 48

Mars Science Laboratory 2009 Delta DOR; Instrument Checkout 1 ends in week 45, TCM in week 46

New Horizons Checkout ends week 46, Cruise/Telemetry in week 48

Rosetta Earth Swingby ends week 48



RESOURCE ALLOCATION REVIEW

Events, Recommendations and Analyses

2009 – November (Weeks 45 - 48) (Continued)

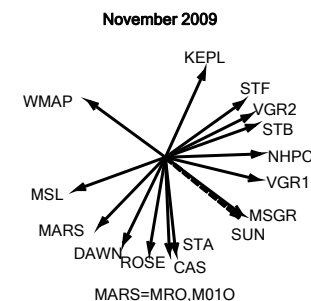
EVENTS

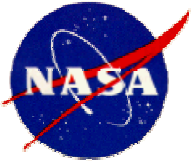
SGP Crust Dynamics W-M4 in week 46, B-M4 in week 47, H-M4 in week 48

SOHO Keyhole Maneuver in week 45, Keyhole ends week 46

Voyager 1 ASCAL Array in week 45, MAGROL Array ends week 45

Voyager 2 BLF ends in week 45, MAGROL Overlay in week 46





RESOURCE ALLOCATION REVIEW

Events, Recommendations and Analyses



2009 – November (Weeks 45 - 48) (continued)

RECOMMENDATIONS

DSS-65 approve proposed downtime for Life Extension ending in week 48.

M01O THEMIS 10-hour passes at DSS-43,63, MSPA with MEX Orbital Science at DSS-14,15 7 of 14 passes at DSS-43,63 and reduce passes to 8 hours. MSPA with MRO Relay Comp at DSS-25,26,34,54,55 remaining 7 passes at DSS-43,63. (1,2)

MEX Orbital Science at DSS-14,15, MSPA 7 of 7 passes with M01O THEMIS 10-hour passes at DSS-43,63 and move to DSS-43,63. (1)

MRO Relay Comp at DSS-25,26,34,54,55 MSPA 7 of 7 passes with M01O THEMIS 10-hour passes at DSS-43,63 and move to DSS-43,63. (1,2)

MSGR Cruise at DSS-26,34,54 move 7 of 7 passes to 34HEF. (2)

VGR2 move support from DSS-43,45,34 to DSS-43,45 in weeks 45 – 47. (2)



RESOURCE ALLOCATION REVIEW

Events, Recommendations and Analyses

2009 – November (Weeks 45 - 48) (continued)

ANALYSES

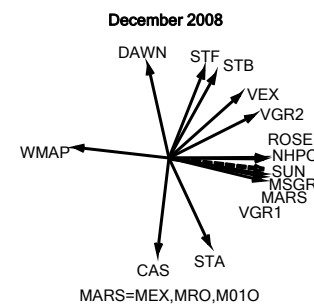
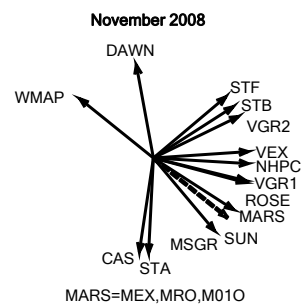
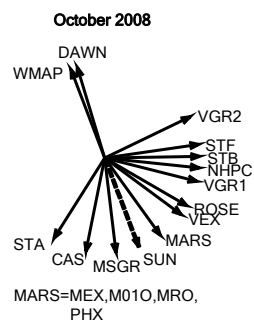
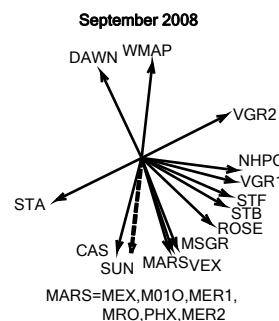
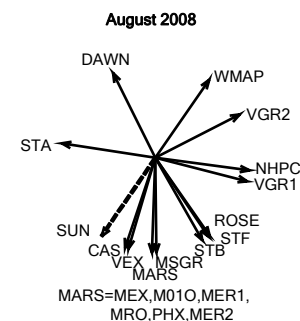
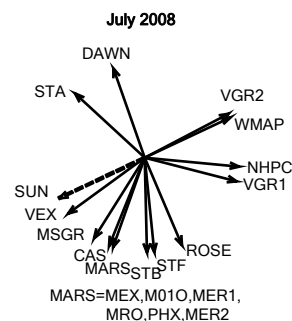
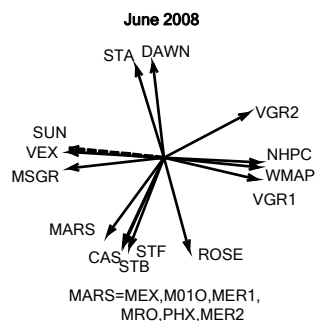
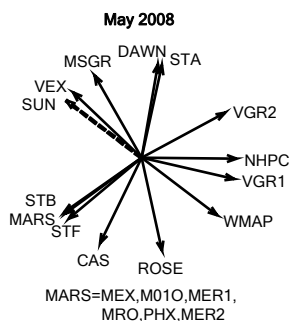
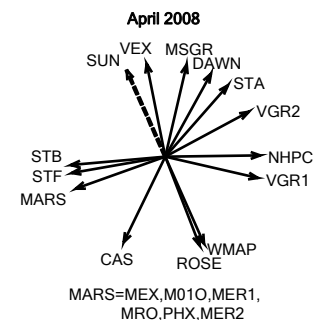
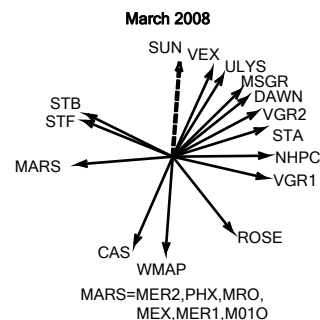
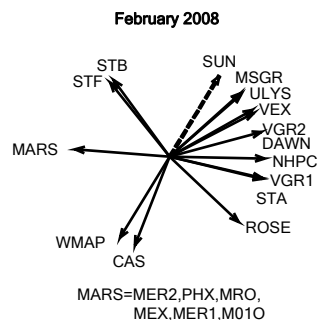
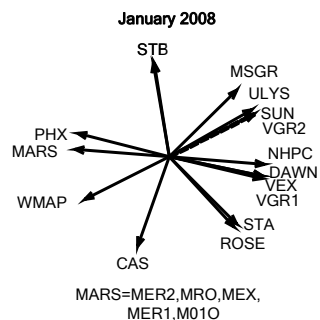
1. (70M) The projected unsupportable time is moderate to severe for CLU2, DSS Maintenance, M01O THEMIS, MSL TCM, and VGR2. Contention is due to significant view period overlap of most missions, DSS-14 and DSS-65 downtime and oversubscription of the 70M subnet and MSL TCM.
2. (34BWG1) The projected unsupportable time is moderate to severe for ACE, CHDR, CLU2, DSS Maintenance, KEPL, MRO, MSGR, MSL, SOHO Keyhole, STA, STF, VGR2 and WIND. Contention is due to significant view period overlap of most missions and DSS-14 and DSS-65 downtime.

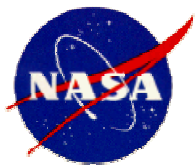
Contention levels on the 34HEF, 34BWG2 and 34HSB subnets are workable and should resolve during final schedule preparations and negotiations



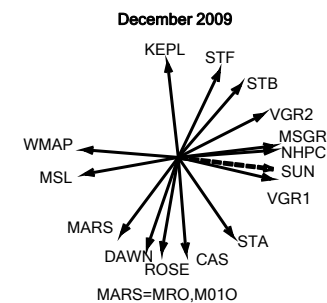
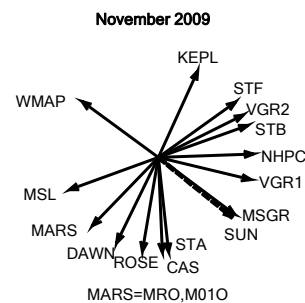
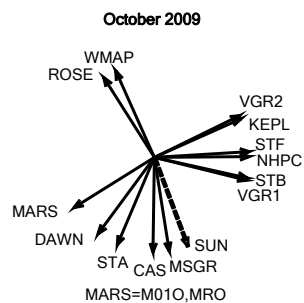
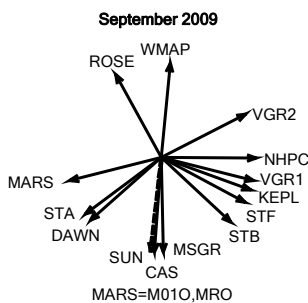
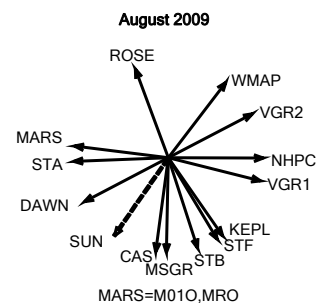
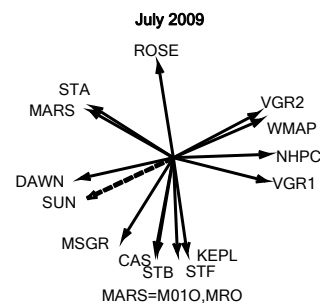
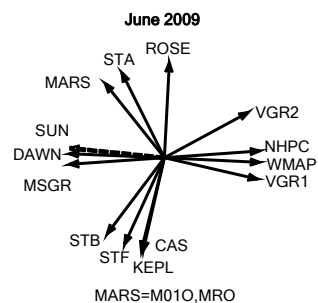
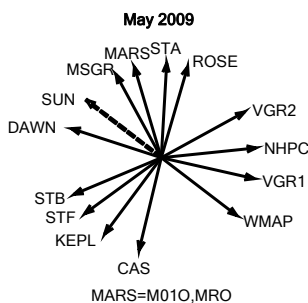
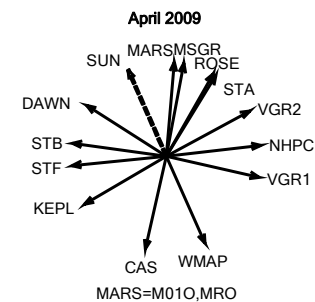
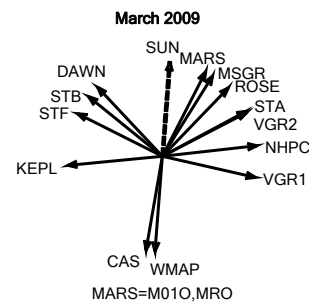
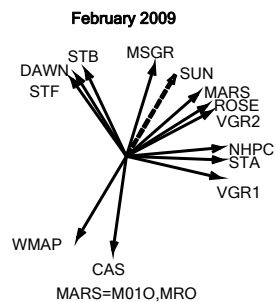
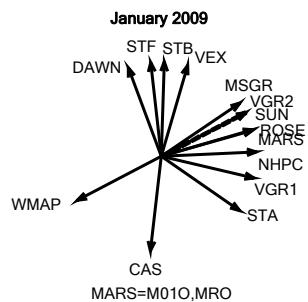
Spacecraft Right Ascension

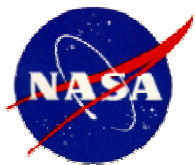
2008





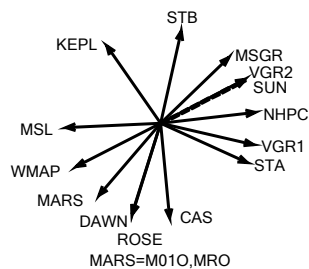
Spacecraft Right Ascension 2009



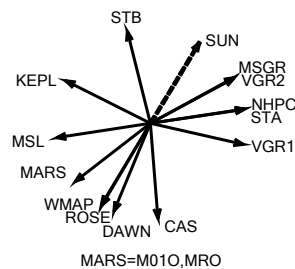


Spacecraft Right Ascension 2010

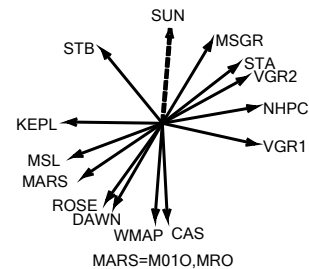
January 2010



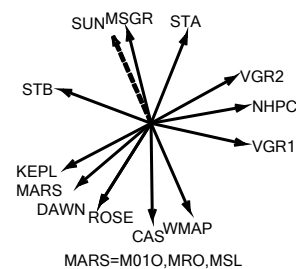
February 2010



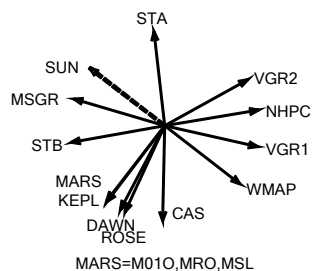
March 2010



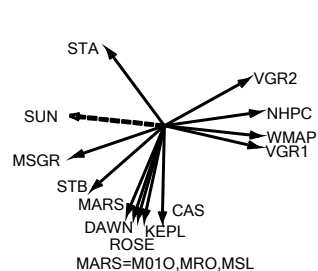
April 2010



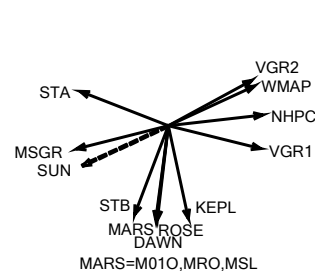
May 2010



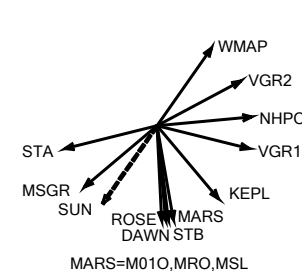
June 2010



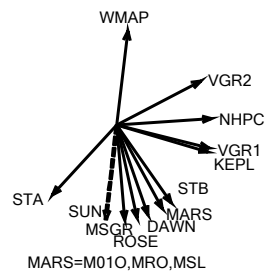
July 2010



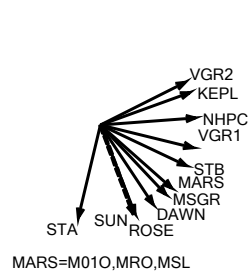
August 2010



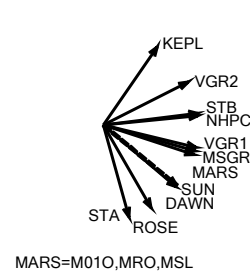
September 2010



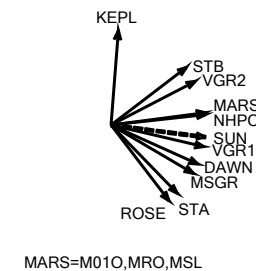
October 2010

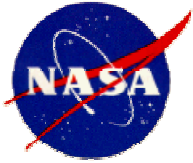


November 2010



December 2010





RESOURCE ALLOCATION REVIEW Supplemental Materials



**Supplemental materials may be found on the
Resource Allocation Planning Service (RAPS) Homepage at:
<http://rapweb.jpl.nasa.gov>**

- ◆ **Ongoing Users Negotiated Requirements
Individual User Loading Profiles**
- ◆ **Resource Allocation Review Information
Supplemental Yearly Information**